



Orange County Transfer of Development Rights Feasibility Study

Phase II Report



Staff Note

The abridged version of the TDR Feasibility Study Phase I & II approved November 2, 2006 by the BOCC includes the Table of Contents of the Full Report (full report can be viewed/downloaded at www.co.orange.nc.us/planning) and the Executive Summary.

In addition, the Scope of Services for Phase III Orange County TDR Program Design and Implementation Plan is attached as a program guide for ordinance development.

If there are questions, please call my office and/or Glenn Bowles at (919) 245-2575.

Craig Benedict, AICP
Orange County Planning Director

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EXECUTIVE SUMMARY

The findings from the feasibility assessment are in four categories: legal, administrative, design, and economic, each of which is summarized below. Following the findings summaries, a set of remaining issues that will need to be addressed during the program design phase of the study are considered, as well as recommendations for the County's consideration for specific activities to be undertaken during the program design.

The main report is organized as shown below:

Section 1.0 Legal Assessment: An assessment of current legal conditions in North Carolina that may affect the design and implementation of a TDR program.

Section 2.0 Program and Administrative Design Assessment: Provides a decision-making flowchart of major TDR options, and the mechanisms for creating a TDR program.

Section 3.0 Sending and Receiving Areas Assessment: This section covers sample Sending and Receiving Area conditions as suggested by staff and the TDR Task Force.

Section 4.0 Program Evaluations: Outlines the impacts that a TDR program may have on existing programs and services in Orange County, especially the Lands Legacy Program.

Section 5.0 Economic Feasibility Model: Provides an initial assessment of the economic viability of a TDR program for Orange County.

Legal Feasibility

There are some legal limitations on how the County may create and operate a program that accomplishes a transfer of development rights from one property to another (a TDR program):

- The County can rely on its existing authority to:
 - Purchase conservation easements** from private property owners;
 - Award density bonuses** for provision by a developer of amenities, public facilities or other public services identified by the County as going beyond the minimum requirements established in its ordinances for land development and that serve the public good and help the County meet its land use and other public policy goals and objectives;
 - Adopt land use regulations to:

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- o **Designate areas** or properties eligible to sell conservation easements to the County (Sending Areas) and areas or properties eligible to receive a density bonus (Receiving Areas);
- o Establish **minimum eligibility criteria** for Sending Area properties;
- o Establish **maximum density bonus limits** for Receiving Area properties; and,
- o Establish **varying levels** of Receiving Area density bonus for easements on different Sending Area properties, based on the extent to which a property meets or furthers important County policy objectives.

Together, these existing authorities allow the County to create a program that effectively accomplishes a transfer of development rights from one property to another.

Unless it obtains special authorization from the General Assembly, **the County may not:**

- Allow development rights to “float” (without being immediately attached to a Receiving Area property once they have been severed from a Sending Area property through a conservation easement);

Unless it obtains special authorization from the General Assembly, **the County should avoid:**

- Establishing pre-set easement acquisition prices and pre-set density bonus fees; instead, the County **should allow private market negotiations** between Sending and Receiving Area property owners to determine the dollar value of the transactions while the County determines the amount of density bonus awardable for meeting specified Sending Area preservation criteria.

Municipalities may enter into agreements with the County to participate in a TDR program that fits the parameters outlined above;

- However, municipalities may prefer to obtain special authorization from the General Assembly clarifying that their authority to award density bonuses for provision by a developer of protected open space extends to open space that is provided outside of their jurisdiction and in a location not adjacent to or within walking distance of the property receiving the density bonus.

Program Design Issues

On each of several issues regarding how the TDR program is designed, there are two or more equally feasible options that will need to be decided among if the County decides to proceed with creating a TDR program. The TDR program’s main purpose or purposes will need to be clearly articulated to serve as a guide for many of the decision points that follow:

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- Method of designating Sending and Receiving Areas:** mapped boundaries versus criteria-based eligibility?
- Minimum acreage requirement in Sending Areas:** should there be a minimum acreage requirement for participation as a Sending Area property? If so, what should the minimum be?
- Partial transfer of Sending Area development potential:** Should Sending Area property owners be permitted to retain a portion of their property's development rights when they sell development rights? If so, how large a portion should they be permitted to retain?
- Density bonus cap in Receiving Areas:** uniform limit or variable basis?
- Sending Area allocation of transferable development rights:** uniform basis or variable merit basis?
- Receiving Area awarding of density bonus:** uniform basis or variable merit basis?
- Receiving Area commercial use of density bonus:** allow for this at start-up, or decide after acquiring experience with residential uses? If applied at start-up of the program, then how to decide the appropriate TDR density bonus as credits transition from residential to commercial use?
- Sending Area participation incentives:** will pent-up demand from the Lands Legacy program reduce or eliminate the need for incentives, or will the size of the Receiving Area and its ability to absorb Sending Area development rights dictate few or no Sending Area incentives? If incentives are used, which ones? (Allocating more development rights than the zoning allows -- either with or without the Comprehensive Plan's potential downzoning -- or using criteria to vary the allocation of development rights above those allowed by zoning)
- Receiving Area participation incentives:** can the TDR process be designed to be more welcoming to developers than existing processes and so provide an incentive, and if not, what other incentives will be needed to entice developers to participate? (Applying a multiplier to transferred development rights, allowing commercial use of transferred development rights, using criteria to vary the density transfer limit, enacting a modest downzoning?) In Orange County, the most important form of Receiving Area incentive may be providing a process for achieving intensified development that is more certain, less time-consuming and less costly to developers than existing processes.
- Sending Area development restrictions:** will there be a standard set of development restrictions or will they be negotiated on a per-easement basis?
- Receiving Area development requirements:** how will the community's desire to control the quality and character of more intense development be balanced with the desire to make participation attractive to developers?

- Sending Area re-purchase and re-attachment of development rights:** permit this at all, or decide only after acquiring experience with the program?

Administrative Design Feasibility

There are no absolute barriers to the administrative launching or operation of a TDR program. However, the following items may guide the ultimate design of the program.

- There are pros and cons to either administering it through **one centralized department or through several departments**. TDR participants would likely prefer a “one-stop shopping” approach, whereas it may be more efficient from the County’s perspective to utilize staff in multiple agencies to handle TDR procedures.
- An **initial investment of funds** will be needed to staff and operate the TDR program, but the potential exists for a net increase in tax revenues to support some or all of its operating costs.
- A critical component of the inaugural and ongoing operating costs will be **public communications**.
- The County will want to **set performance objectives** for the TDR program and then develop a comprehensive but simple and relatively inexpensive set of measurements to **evaluate the program’s performance** against those objectives.
- There are pros and cons to either allowing for **administrative approval** of TDR applications (i.e., Staff review and approval only) or requiring a **quasi-judicial review and approval** process involving the County Commission. While an administrative review would provide an important level of clarity and surety to potential private developers, the County Commission and the public may not accept a program without approval by elected/appointed officials.
- The TDR program’s design and inauguration should be **coordinated with other programs and initiatives** of the County to take advantage of opportunities for complementary services (e.g., Lands Legacy Program) and avoid competing with or detracting from them. In particular, while it should be closely coordinated with the update of the Comprehensive Plan’s Land Use Element, at this time neither one needs to be postponed until the other is completed.

Economic Feasibility

The balance of supply and demand in a TDR program is a critical step in structuring a successful program. The supply and demand is a direct result of the key elements of the program: Sending and Receiving Area locations and sizes; density bonuses; TDR allocation rates; and other factors. An analysis was

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performed of the supply and demand from the three Sending and Receiving Area scenarios developed by the TDR Task Force (see Figure ES-1.)

**Figure ES-1. Receiving (1) and Sending Area (3) Scenarios
(full page maps located in Appendices I and J)**

RECEIVING AREA SENDING AREA 1 SENDING AREA 2 SENDING AREA 3

The results, shown in Figure ES-2, can vary significantly depending on the TDR allocation rates, density bonus, and expected participation rate used. For the analysis, a spreadsheet model was designed to facilitate different “what if” scenarios reflecting the different values for the key variables. These assumptions can be altered to develop three or more alternatives that demonstrate different objectives or assumptions. This will generate feedback and assist in selecting the preferred alternative.

Figure ES-2: SUMMARY

Total Eligible Sending Acres	180,471	82,892	74,723
Total TDR Supply (100% Participation)	180,471	82,892	74,723
Total TDR Supply (80% Participation)	144,377	66,314	59,778
Total TDR Supply (50% Participation)	90,236	41,446	37,361
Total Receiving Area (acres, less built-upon land)	7,513	7,513	7,513
Maximum Allowed TDR Credits	31,698	31,698	31,698
80% Adjustment for Developer Utilization	25,358	25,358	25,358
Potential TDR Credits	25,358	25,358	25,358
Net Supply-Demand (100% Participation)	155,113	57,534	49,364
Net Supply-Demand (80% Participation)	119,019	40,956	34,420
Net Supply-Demand (50% Participation)	64,878	16,088	12,003

Given the assumptions, all scenarios will provide an attractive market for the exchange of TDR credits. All three Sending Area scenarios will produce a sufficient supply of credits. However, there is an imbalance in supply and

demand as shown in Figure ES-2. Because of the large size of Sending Area 1 (includes all land within the County's jurisdiction except for land in the receiving areas), there is a large amount of credits that cannot be accommodated within the receiving area. Sending Area 2 also produces a large amount of credits that are not accommodated. Sending Area 3 produces an amount that is more balanced with the demand of the receiving area. As identified in the Analysis of Supply and Demand Section, the imbalance can be addressed through the following:

- increasing the density bonus rate;
- adjusting the TDR allocation rate;
- a reduction in the participation rate of the sending areas;
- enlarging the size of the receiving areas;
- reduced demand through applying design standards or affordable housing requirements;
- making the conservation easement language more restrictive in Sending Areas;
- allocating more credits for certain types of development; and
- converting sending area credits to credits for increasing commercial development within Economic Development Zones or other areas suitable for commercial use.

Due to the high variability in the cost of land within the County, it is recommended that the County and participants in the TDR program should consider an appraisal for the development easements on the subject properties. This process is currently used by the County when purchasing conservation easements. An appraisal will help ensure that both buyers and sellers are treated fairly and receive consistent and fair pricing.

One potential option to address problems, if any, related to having more Sending Area acreage than exists in Receiving Areas is that the program be structured in phases. The first phase uses targeted sending and receiving areas - the Receiving Area combined with parts of Sending Area Scenarios 2 or 3. Once the County develops experience with the start-up TDR Program, the Program can be expanded to include places in Sending Area Scenario 1.

Recommendations for Proceeding

If Orange County determines that it wishes to proceed with developing a TDR program within the guidelines established in Phases I-II of the TDR Feasibility Study, the following is the recommended process for doing so:

1. Conduct County Commission work session(s) to identify and prioritize TDR goals and objectives;
2. Develop a proposed TDR Plan with significant public and key agency staff involvement; and

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3. Adopt the TDR Plan with full public notice, public hearings and vote by County Commission.

The County would then be prepared to implement the TDR Plan, including providing adequate resources for both the initial launching and ongoing operation of the TDR program. While the first and third steps are each critical to the successful completion of the process, the majority of the Phase III work will occur in step 2 above, “Develop a Proposed TDR Plan,” and is outlined in more detail below. Step 2 begins with the goals and objectives specified for the TDR program by the County Commission, and it ends with a proposed TDR Plan ready for final public review and comment prior to a vote on its adoption by the County Commissioners. The proposed TDR Plan consists of these main components:

- Goals and Objectives for the proposed TDR Program;
- The Program Design elements of the proposed TDR Program;
- The Administrative Design elements of the proposed TDR Program;
- Evaluation measures for the proposed TDR program;
- Proposed TDR ordinance language; and
- Estimated staffing and other resource costs associated with the launching and ongoing operation of the proposed TDR program.

The recommended process for Phase III’s Step 2, “Develop a Proposed TDR Plan” is as follows:

2A. Select Program Design Options

- Conduct an in-depth economic valuation assessment on Receiving Area design options; to include more detailed information on valuation on properties and tax assessment data
- Planning Board and key departments staff work session(s) to prioritize Program Design options based on compatibility with existing programs and initiatives and fit with TDR goals and objectives
- Task Force provides input into selection of Program Design options based on economic feasibility results and fit with TDR goals and objectives
- Consultants make recommendations in consultation with Planning Staff on selection of Program Design options based on all of the above considerations

2B. Select Administrative Design Options

- Key departments staff work session(s) to identify and quantify operating requirements and costs associated with Administrative Design options
- Task Force provides input into selection of Administrative Design options based on economic feasibility results and fit with TDR goals and objectives
- Consultants make initial recommendations to Planning Staff on selection of Administrative Design options based on all of the above considerations

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2C. Finalize Proposed TDR Implementation Plan

- Conduct Planning Board and key departments staff work session(s) to review selected Program and Administrative Design options and to recommend appropriate TDR Program Evaluation measures
- County Commission work sessions to review selected Program and Administrative Design options and to select appropriate TDR Program Evaluation measures
- Finalize selection of Program and Administrative Design options and Evaluation measures for inclusion in TDR Plan

2D. Draft TDR Program Ordinance Revisions

- Draft proposed TDR ordinance language based on selected Program and Administrative Design options and selected Evaluation measures
- Conduct Planning Board and key departments staff work session(s) to review proposed TDR ordinance language and prepare initial staffing and other resource cost estimates
- County Commission work sessions to review proposed TDR ordinance language, staffing and other resource cost estimates
- Finalize proposed TDR ordinance language, staffing and other implementation cost estimates

2E. Prepare for TDR Implementation Plan Adoption

- Conduct public work sessions with Task Force to familiarize the public and property owners with the proposed TDR ordinance language; staffing and implementation cost estimates; the proposed Evaluation measures; and to receive public feedback
- Present public feedback findings to Planning Board and County Commission; revise TDR Plan and implementation costs estimates as needed based on direction from County Commission

2F. Build Public Awareness, Understanding, and Seek Public Input

- Develop and conduct a public awareness and education program about the TDR Plan and the TDR Program; make informational materials readily available through multiple outlets to reach as many residents and businesses as possible; provide multiple means for the public and property owners to give feedback or ask questions; continue this throughout the process of developing the Plan and preparing to adopt the program
- Conduct public work sessions with Task Force participation to familiarize the public and property owners with the initially-recommended Program and Administrative Design options and to receive feedback; revise selections as appropriate & conduct additional public work session(s) if needed

LEGAL ASSESSMENT

This section of the Feasibility Study focuses on the legal issues surrounding implementation of Transfer of Development Rights (TDR) in North Carolina. First, the legal issues are identified, and then the results of research into those issues are presented, as follows:

I. Issues

II. Research Results

A. Constitutional Challenges to TDR

1. Uniformity and Spot Zoning
2. Substantive Due Process
3. Taking of Property

B. Lack of Specific Statutory Authority

C. Relationship of TDR to Other Permitted or Prohibited Practices

1. PDR and Conservation Easements
2. Zoning
3. Impact Fees
4. Other N.C. Regulatory Programs

D. Other Legal Issues

III. Conclusion

IV. References

1.0

SECTION

In assessing the legal context for TDR in North Carolina, these basic questions arise:

- 1. Are the basic premises of TDR programs constitutional?*
- 2. Do the states have the authority to establish and operate TDR programs (and thus, to delegate that authority to counties and cities)?*
- 3. Do local governments in N.C. have the authority to establish and operate a TDR program?*
- 4. What constraints on, or requirements for, the design of a TDR program are present in existing N.C. law?*

The first two questions about constitutionality and state authority have fairly straightforward answers. First, TDR concepts have been judged constitutional by U.S. courts as long as some common-sense guidelines are followed; and, although no cases have been tried in N.C. courts, no articles or published works have yet suggested a N.C. constitutional bar to TDR, and nothing in the N.C. Constitution suggests that a common-sense TDR program would be in violation of it. Second, the federal government has given states all the authority they need to establish and operate TDR programs, including delegating that authority to counties and cities. Each of these is addressed in more detail in later sections of this report.

Determining answers to the third and fourth questions is much less clear-cut. In the absence of statewide TDR enabling legislation in N.C., the issue revolves around whether a strict “Dillon’s Rule” interpretation is to be applied to the General Statutes governing the regulating powers of counties and cities, or whether the “broad” interpretation standard of General Statutes 153A-4 and 160A-4 are applicable. (A review of these competing interpretations in recent N.C. case law is provided in the appendices to this report.) N.C. has traditionally been viewed as a “Dillon’s Rule” state, meaning that in North Carolina, all authority is reserved to the state except that authority delegated to counties and cities through the N.C. General Statutes. (The reverse is true in “Home Rule” states; i.e., all authority is delegated to counties and cities except that which is specifically reserved to the state.) Since the N.C. General Assembly has not enacted any legislation explicitly either prohibiting or authorizing local TDR programs, nor has any local government implemented a TDR program in N.C. that would provide a precedent in the N.C. courts, any county or city wishing to establish a TDR program must evaluate each component of TDR programs against the more general authorities granted to it under the General Statutes to determine whether TDR can legally be accomplished under N.C. law. Unfortunately, N.C. case law has produced significant ambiguity about how

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broadly or narrowly the General Statutes are to be construed in cases where there is room for interpretation.

Proceeding with an evaluation of the legal standing in N.C. of components of a local government TDR program, these questions arise:

- 1. Can development rights be severed from real property and transferred to another property as a means of increasing the as-by-right development potential of the other (receiving) property? (And: how does the answer vary depending on whether the other, receiving property is contiguous or not and owned by the same owner or a different owner? Also, how does the answer vary depending on whether the transfer is residential-to-residential or residential-to-commercial?)*
- 2. Are the severed development rights a form of intangible personal property or an interest in real property? (And what are the implications for TDR transactions of the answer to that question?)*
- 3. Can local governments regulate the severing and transferring of development rights within their jurisdictional boundaries? (And: can they act together with other local governments to do this? Can they do so either administratively or through a quasi-judicial review process?)*
- 4. Can local governments purchase severed development rights?*
- 5. Can local governments extinguish severed development rights they have purchased?*
- 6. Can local governments sell severed development rights?*

The first three questions deal with the basic mechanics of severing and transferring development rights, while the last three questions deal with the extent of involvement of local government in effecting TDR transactions. Positive answers to the first question will suggest that TDR transactions can be permitted under N.C. law. The answers to the second question may help shape the form a TDR program takes based on N.C. real estate and tax laws. The answer to the third question will help determine what type of local ordinances are required to implement TDR locally (i.e., if the transactions themselves are permissible under N.C. law, then what kind of regulations on those transactions may local governments impose and what kinds of incentives may they construct to encourage such transactions?) The answers to the last three questions will help determine the extent to which it is permissible or practical for a local government to operate a TDR bank.

In summary, the preliminary issues identified for the analysis of the legal standing of TDR in N.C. include issues of constitutionality; questions of the basic mechanics of severing and transferring development rights; and questions of local governmental authority to regulate and participate in TDR programs.

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II. Research Results

While Transfer of Development of Rights (TDRs) has been successfully implemented in a number of states, it has not gone unchallenged. Below is a discussion of the most common legal challenges to TDR programs, beginning with constitutional challenges and then moving on to an in-depth discussion of the local authority of North Carolina to enact TDRs. Appendices to this report contain a review of pertinent N.C. General Statutes and a summary of recent case law research for TDRs in North Carolina.

A. Constitutional Challenges to TDR

The constitutional challenges to TDR are grouped under four key issues: uniformity, equal protection, due process, and takings. Each is discussed below. In general, the State courts and the U.S. Supreme Court have ruled that the basic premises of TDR are constitutional, or that resolution of the dispute hinged on aspects of the case other than the constitutionality of TDR.

1. Uniformity and Spot Zoning

In *Dupont Circle Citizens Association v. District of Columbia Zoning Commission*¹, the Washington DC Appellate court rejected **statutory uniformity** as a challenge to TDR. **Spot zoning**, when a small area of land or section in an existing neighborhood is singled out and placed in a different zone from that of neighboring property, was rejected as a challenge to TDRs by the New York Supreme Court in the 1975 case of *Fur-Lex Realty, Inc. v. Lindsay*². In the landmark case of *Penn Central Transportation Co. V. City of New York*³, involving the use of TDRs for historic preservation, the US Supreme Court ruled that historic preservation sites are not analogous to spot zoning and are constitutional. In the case, Penn Central Transportation wanted to build a multistory building above the historical site but was prevented by the Landmark Preservation Law from making changes to the façade.

2. Substantive Due Process

Any zoning restriction imposed on a receiving site must satisfy the due process requirement of being reasonably related to furthering some legitimate public purpose and may not be arbitrary or capricious in its imposition. **Equal protection** was rejected as a TDR challenge by the New Jersey Appeals Court in the 1991 case, *Gardner v. New Jersey Pinelands Commission*⁴. Mr. Gardner argued that the comprehensive management plan of the New Jersey Pineland's Commission was more restrictive and had fewer benefits than the easement program under

¹ 355 A.2d 550, 558 (D.C. App. 1976)

² 367 N.Y.S.2d 388 (1975)

³ 435 U.S. 920 (1978).

⁴ 125 N.J. 193, 593 A.2d 251 (1991)

the Right to Farm Act in which some of his neighbors participated. In *City of Hollywood v Hollywood Inc*⁵, the Florida Appeals court upheld the **due process** validity of zoning restrictions imposed on the TDR sending zone; however the case did not address the validity of base zoning restrictions imposed on the receiving sites.

TDRs may give rise to other due process arguments. According to McEleney, one is that “the redistribution of density under a TDR plan is inherently contrary to zoning policy. ... As a density redistribution plan, TDRs are premised on the assumption that no harm results by allowing the density in one lot or area to be greater than otherwise permitted as long as the density in a nearby lot or area is kept correspondingly low. This assumes, though, that an area will completely fill the density it is zoned for. In reality, most high density areas are zoned under the assumption that the majority of lots will not be utilized to the maximum extent allowed.” (McEleney, 1995, p. 6) McEleney suggests that if the underlying zoning was created under the assumption that it will not be used to its full potential, and the use of TDR credits allows for 100 percent use of that potential, then a court could find that to be arbitrary and capricious, violating the Constitution’s due process clause.

The second due process argument is that the density transfers must be justified by a clear planning nexus between the sending and receiving sites. States that provide for transfer of development rights only to contiguous or nearby parcels of land have a clear planning nexus with a clear relationship between the receiving zone and the benefits of preservation in the sending zone. However, TDR plans that allow transfer of development rights over considerable distances show less of a relationship (unless the resource protected has regional significance), and thus may be open to challenges that the effects on adjacent properties of the increased density allowed under the TDR program is an arbitrary imposition of cost on the adjacent property owners. “The density redistribution rationale of TDRs is severely strained unless it can be shown that the owners of property in the Receiving Area receive some benefit from the decreased density of the Sending Areas.” (McEleney, 1995. p. 4)

3. Taking of Property

The Fifth Amendment to the U.S. Constitution reads, in part, "nor shall private property be taken for public use without just compensation." Traditionally, a taking was defined as a physical seizure of property by the state. However, in 1922 the U.S. Supreme Court ruled that governmental interference in the form of excessive regulation may be so burdensome to a landowner as to have the same effect as an actual physical invasion, thus establishing the regulatory taking. (*Pennsylvania Coal Co. v. Mahon*). Land use zoning falls under this broad legally-murky category of regulatory takings.

⁵ 432 So. 2d 1332 (Fla. App. 1983)

To complicate matters, the High Court has ruled that a landowner must lose total use of the property before the government pays compensation. A *partial taking* need not be compensated at all. Consequently, the state has every incentive to have its actions deemed partial rather than as a full taking of property. Some governing bodies view TDR programs as a way to achieve this goal. In *Penn Central v. City of New York*, the Supreme Court seemed to indicate that TDR credits have a value that could prevent a total taking of property – and thus provide the required compensation. In this case, Penn Central Transportation entered into an agreement to construct and operate a multistory building above the terminal. However, the Landmark Preservation Law prevented such changes. The Supreme Court ruled that there was no taking because Penn Central could earn a reasonable return on the existing structure and from transferring development rights to nearby sites. This case was significant in that the court paved the way for an innovative use of the TDR: government agencies could limit the density or intensity of development with the air rights above a parcel and use the transfer of such development rights to “soften the blow” (Pruetz, 2003).

However, in the more recent *Suitum v. Tahoe Regional Planning Agency*⁶, this attitude seemed to change. Suitum argued that Tahoe Regional Planning Agency (TRPA) violated her due process rights by preventing her from building a home on her residential lot, effectively eliminating or materially impairing the beneficial use of their property. The lower courts had concluded that the extent to which her property rights had been economically affected could not be determined because of her failure to pursue use of the TDRs. The Supreme Court held that Suitum could maintain her claim that her property had been taken without compensation by TRPA which prohibited her from developing her property even though she had not attempted to sell or transfer the property or the TDRs to which she was entitled. Although many dealing with TDR hoped that the Supreme Court would go further and give a judgment as to whether the taking of Suitum’s land was constitutional, the Court only rendered a decision that the case was ripe for adjudication which allowed Ms. Suitum to take her case back to the lower courts. In 1998, the Nevada District Court denied the TRPA request for summary judgment, ruling that the value of the TDRs is irrelevant to the issue of whether a taking had occurred (Dowling, 2005). The court thus signaled that the case would turn not on the use of TDRs, but on the extreme downzoning of the property. Eventually, in 1999, the TRPA settled the case for \$600,000 just before the case was to go back to district court. However, this case was unique in that the land Ms. Suitum purchased was in a “stream environment zone” which allowed no development or permanent land disturbance. Ms. Suitum had purchased the land before the Regional Plan to protect the streams was enacted (Crofton, 2003).

It must be noted that the Suitum case concerned only the legal outer bounds of the issue – situations in which parcels in a given Sending Area are stripped of all

⁶

rights to build. So long as a bare minimum of development is permitted on a particular set of landholdings, there may be no 'takings' issue. Montgomery County cleverly kept within the bounds of this loophole because it rarely zones land as zero-growth. It implemented a baseline minimum of one dwelling per 25 acres in its Sending Areas. The result has been a proliferation of overpriced rural 'estates', which may be less desirable than maintaining agricultural land, but may better meet local conservation goals than the sprawling alternative (Pruetz, 1998).

Other writers have speculated that the *Suitum* case heard by the Supreme Court might have been deemed a 'just compensation' if Lake Tahoe had some sort of TDR bank in place, whereby the owner could have quickly and easily sold TDRs at a fair minimum price without having to enter the marketplace. A TDR bank ensures liquidity and bridges the time gap between when an owner wishes to sell rights and when a developer needs to purchase them (Hanly-Forde et al, 2003).

B. Lack of Specific Statutory Authority

How much authority do local governments have in implementing transfer of development rights? In North Carolina, there is no statewide enabling legislation for the general use of TDRs by local governments, although there is enabling legislation for the limited use of TDR in the context of dedication of street rights-of-way. G.S.136-66.11, Transfer of Severable Development Rights and G.S.136-66.10, Right-of-Way under Local Ordinances, are the two general statutes in North Carolina under which the State permits local governments to use TDR. These two statutes allow a city or county in its zoning or subdivision control ordinances to provide for the "establishment, transfer and exercise of severable development rights to implement the provisions of G.S. 136-66.10 and this section" (G.S.136-66.11). Pruetz (2003) cites G.S.136-66.11 to support his statement that communities in North Carolina "can adopt TDR programs as long as specified procedures are followed." Similarly, Bredin (2000) notes these two statutes in an article about state TDR enabling legislation.

However, the lack of broad TDR enabling legislation, by itself, would not necessarily prevent local governments from using TDR in more general applications, depending on which state the local government is in and whether the state is under Dillon's Rule or Home Rule.

All states receive their authority to govern from the federal government. Home Rule states delegate all of that authority to their local governments except for specific powers that the state retains for itself. Dillon's Rule states retain all of their authority except for specific powers which they delegate to the local governments. Dillon's Rule was named in honor of Judge John F. Dillon, who wrote an early treatise on municipal corporation law. This principle has been followed since the mid-1870s by North Carolina's courts in determining whether a local government has authority to engage in a specific activity. Under Dillon's Rule, a local government has only certain powers:

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- 1) those granted to it by the legislature in express words;
- 2) those necessarily or fairly implied in or incident to the powers expressly granted; and
- 3) those essential (that is, not simply convenient, but indispensable) to accomplishment of the unit's declared objects and purposes (Bell, 1995).

The figure below shows which states are home rule and which are Dillon Rule.

Figure 1-1

Source: Puentes, 2003.

While this system may seem very simple, the legal system sometimes makes it very difficult to determine whether North Carolina is truly a Dillon's Rule state. The North Carolina General Assembly enacted two statutes which gave broader powers to the local governments:

- **N.C. Statutes section 160A-4**, enacted in 1971, referred to cities' authority
- **N.C. Statutes section 153A-4**, enacted in 1973, referred to counties' authority

These two statutes say that the local governments should have adequate authority to execute the powers, duties, privileges, and immunities given to them by law. Therefore, these statutes should be "broadly construed" and the grants of powers to the local governments should be construed to include any additional and supplementary powers that are necessary or expedient to carry them into execution and effect. This is true as long as those powers are not contrary to state or federal law or to the public policy of the State.

According to Richardson, North Carolina Statutes sections 153A-4 and 160A-4 "clearly abolish Dillon's Rule and mandate a more liberal interpretation of grants of authority to local governments in North Carolina, at least with respect to certain grants of power" (Richardson et al, 2003). Bell (1995) agrees that these two statutes state a rule "quite different from Dillon's Rule" because the statutes allow the authority of the cities and counties to be more broadly construed and include powers that are reasonably expedient to exercise those grants. This

language is probably more expansive than the Dillon's Rule requirement that additional powers must be "necessarily or fairly implied" from the express grant of power (Bell, 1995). David Owens from the Institute of Government at UNC Chapel Hill argues that Dillon's Rule no longer applies in North Carolina. He notes that the key issue for the courts in interpreting legislation is the General Assembly's intent. The General Assembly clearly said grants of authority should be broadly interpreted (Owens, 2003). Owens notes that court opinions which use the narrower view of local government's authority overlook the intent of GS 160A-4 and GS 153A-4. However, N.C. courts have not always appeared to agree with these interpretations.

With the conflict of Dillon's Rule and the two N.C. Statutes, the courts were not directly confronted with the inconsistencies until two recent cases decided in 1994 (*Homebuilders Association of Charlotte, Inc., v. City of Charlotte*, and *Bowers v. City of High Point*). Although decided in the same year and in the North Carolina Supreme Court, the two cases reached apparently conflicting decisions on these issues. Ten additional cases over the next decade only added to the confusion. (See Appendices for a detailed review of these dozen cases.)

The legislative climate has not been favorable to resolving the issue, either. In the 2003-2004 session of the N.C. General Assembly, Senator Daniel Clodfelter of N.C. sponsored a bill, **Senate Bill 160**, that would allow local governments broader authority. On 4/29/03 Senate Bill 160 was sent to the Senate Finance Committee. However, the Legislative Review (a publication for ElectriCities Members in Raleigh) states that "It is certain that the bill has died there" (Legislative Review, 2003). The Review quotes strong opposition from the Home Builders Association as one of the major reasons. In an interview, Senator Clodfelter said he felt that the Bill had died in committee due to opposition.

Two recent developments promise much-needed clarification on these issues:

The January, 2005 decision in *BellSouth Telecommunications v. City of Laurinburg* and a pair of bills approved by the Senate during the 2005 legislative session (SB 814 and SB 518) and pending approval in the House.

BellSouth v. City of Laurinburg (606 S.E. 2nd 721, 2005 N.C. App.) is the most recent case dealing with these issues. It was decided in favor of the City in January, 2005, and plaintiff's discretionary review petition to the N.C. Supreme Court was denied in June, 2005. This case now sets important precedent on these issues, and its attempt to clarify and make consistent prior rulings on these issues is very helpful. The court declared that G.S. 160A-4 (for cities, and by implication, 153A-4 for counties) supersedes Dillon's rule in N.C., and articulated three tests for determining local authority:

1. If the "plain meaning" of the relevant statutes is clear and not vague or ambiguous as to local authority, then no "broad interpretation" may be

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applied, and the action is either permitted or prohibited as the “plain meaning” dictates.

2. If ambiguity exists, and the action is “reasonably expedient to the exercise of” another authority that has been granted, then the action is authorized. (This language comes from G.S. 153A-4’s mandate for “broad construction” of grants of local authority to counties. For cities, and for county powers granted under Chapter 160A, G.S. 160A-4’s language is “reasonably necessary or expedient”.)

3. Finally, the Court of Appeals stated that G.S.160A-4’s language must “be construed in favor of extending powers to a municipality where there is an ambiguity in the authorizing language.” (The Court’s decision in *BellSouth v. City of Laurinburg* was based on this interpretation.)

Clearly, a local action that meets test (a) or even test (b) carries a greater degree of certainty as to local authority and is more likely to be upheld if challenged in court than an action that only meets test (c). The Court used these three tests to demonstrate that prior rulings that appeared inconsistent had in fact been consistent in upholding G.S. 160A-4 (and 153A-4 by implication) when the “plain meaning” of the law test did not apply.

In the current legislative session, Senator Clodfelter has introduced both **Senate Bill 518 and Senate Bill 814**, the latter of which was approved in 2005. These bills would modernize and clarify city/county planning and land use management statutes. Senate Bill 518 and 814 both introduce the concept of allowing local governments to enact “unified development ordinances” that could include the regulatory powers currently contained separately in zoning and subdivision ordinances⁷. This proposed change, combined with two other changes proposed in S814, may have implications for local governments’ TDR authority: a) S814 expands the basic grant of power to enact zoning ordinances to include adoption of “development regulation ordinances;” and b) it also adds “conditional zoning districts”, in which “site plans and individualized development conditions are imposed” to the existing array of “general use districts”, “overlay districts”, “special use districts”, and “conditional use districts”. The first of these two changes could be construed to allow TDR provisions as part of either zoning or unified development ordinances, as a “development regulation.” The second may allow TDR Sending and Receiving Areas to be created as conditional zoning districts, providing more flexibility in how TDR is implemented than general use or overlay districts alone. One other change proposed in S814 may make TDR easier to administer in the case of large-scale Receiving Area developments, but otherwise does not appear to affect local governments’ TDR authority: S814 adds provisions for local governments to enter into development agreements for large-scale, multi-year, multi-phase

⁷ In concert with this concept, S814 would change one of the stated purposes of subdivision regulations from creating conditions “essential to” public health, safety, and the general welfare to creating conditions “that substantially promote” it, since “promote” is the word used in the zoning grant of power statutes. This can be construed as providing a slightly relaxed standard for the objectives subdivision regulations may be used to achieve.

development projects. None of the remaining changes proposed in S518 or S814 appear to impact TDR local authority.⁸

In summary, N.C. municipalities and counties do not have explicit authority to enact local TDR programs other than in connection with dedication of street rights-of-way, but neither are they expressly prohibited from doing so. Thus, they may look to other explicit land regulatory authority they have been granted, in combination with G.S. 160A-4 and G.S. 153A-4, to infer the authority to create and operate TDR programs.

C. Relationship of TDR to Other Permitted or Prohibited Practices

While the TDR program may look like an innovative and complicated conceptual approach, it is actually based on existing and widely accepted planning techniques. Below is the relationship of the TDR program to these more familiar programs. To the extent that each of these planning techniques is permitted or not been successfully challenged in the N.C. courts, the argument can be made that TDR is also permitted and would likely be upheld if challenged in N.C. courts.

1. PDR and Conservation Easements

TDR expands on Purchase of Development Rights (PDR) concepts. Under PDR, communities purchase development rights through cash payments in exchange for a deed restriction (for example, a covenant or easement). Such a restriction permanently removes or retires the land's development potential. In a TDR program, once the development rights are separated from the parcel, rather than being retired, the development right can be sold or transferred to another parcel in an area where the additional development potential represented by the purchased right can be realized. Under PDR, development rights are removed from present *and* future use. Under a TDR program, the present development rights are shifted from areas that will be preserved to areas that will be developed at higher densities. Another difference between PDR and TDR programs is the mechanism for making them work. PDRs rely on public officials to plan, coordinate, and map out the purchases of the easements. According to

⁸ The other notable changes proposed in S518 are: a) it allows for different review procedures to be established for different classes of subdivisions; b) it requires planning boards reviewing zoning ordinance amendments to advise and comment as to whether the proposed amendment is consistent with any applicable adopted plan, although lack of consistency would not be a bar to adoption of the amendment; c) it expands on current procedural requirements for board of adjustment hearings; and d) it eliminates redundancy in provisions specifying required public notice and hearings. The other notable changes proposed in S814 are: a) allows subdivision ordinances to require performance guarantees; b) specifies requirements that presale or prelease contracts must meet in order to avoid existing penalties for transferring lots in unapproved subdivisions; c) provides procedures for adoption of temporary moratoria on development approvals; d) requires governing body decisions on zoning amendments to include a statement explaining why the action is reasonable and in the public interest, and whether the action is consistent with applicable adopted plans; and e) provides an option for local governments to reimburse developers for design and construction of public infrastructure when the infrastructure serves the developer's property.

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Machemer, "Once the program is established, TDR relies, to a large extent, on private market sales of development rights between the landowners and others (such as developers)" (Machemer et al, 2000). While it is possible to design a TDR program based exclusively on government purchase and sale of development rights, the distinction is that with TDR the option also exists to use the power of the private market. Like government-operated PDR programs, private conservation easement agreements between landowners and qualified land trusts remove and retire the development rights from a property in exchange for a deed restriction or conservation easement on the property. Thus, the legal processes involved in effecting those transactions can be looked to as well to provide a precedent for the Sending Area portion of TDR programs. The N.C. Conservation and Historical Preservation Agreements Act was enacted in 1979 and recognizes conservation easements as a valid vehicle to protect land from development. While the Act does not require donation of easements, and thus allows for the sale of easements by landowners, it does provide for state tax credits when such easements are donated rather than sold, and is coordinated with federal tax law. N.C. law also provides for county tax assessors to lower the assessed value of properties that are under conservation easement (G.S. 121-40).

Taken together, these two conservation precedents provide positive answers to the question of whether development rights can be purchased and severed from property, either in private or local government-sponsored transactions.

We turn now to the more difficult issues surrounding the transfer of those credits to other, non-contiguous properties to increase their development potential. Without this piece of the puzzle, there will be no private market buyers for severed development rights (other than conservation land trusts and existing government PDR programs.)

The crucial question is whether there are any obstacles in N.C. law to local governments allowing severed development rights (or TDR credits) to be applied to Receiving Areas in exchange for increased intensity of land use. The use of TDRs in Receiving Areas can be looked at as density shifting or as a form of density bonus in exchange for provision of a public good (protected open space in the Sending Area), for which there are precedents in N.C.

2. Zoning

McEleney specifically cites the authority to zone as the basis for authority to enact TDR programs in the absence of statewide TDR enabling legislation (McEleney, 1995). Here is the rationale: TDR programs require communities to define preservation and development districts (sending and Receiving Areas). This type of planning of future design is required for most land-use and growth management planning techniques, and can be accomplished through overlay districts or regular zoning districts. A TDR approach avoids the controversy of

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permitting communities to allow upzoning and zoning variances on an ad hoc basis. Through TDR, the public can capture some of the windfall profit and other benefits that currently go to the individuals who now succeed in getting use variances or zoning changes. The TDR may be viewed as a type of zoning, one that offers a way to compensate for unevenness between two parties: the landowners in the designated growth areas who could gain financial windfalls and the landowners in the preservation areas who could experience financial losses in land values. TDR offers a way to avoid these extremes (Machemer et al, 2000). Other indirect impacts of *ad-hoc* zoning changes on landowners whose property is not in the designated growth areas may include increased pressure to sell their properties, higher demand for infrastructure improvements, and commensurate tax increases.

The constitutional challenges section of this report has already touched on downzonings that often accompany enactment of TDR and avoidance of unconstitutional takings. Clearly, local governments in N.C. have the authority to designate “sending” and “receiving” districts, and even to downzone districts, given an appropriate “planning nexus”, and provided required administrative procedures are followed and proper public notice given and hearings held. But again, without the authority to allow TDR credits to transfer to Receiving Areas, those designations would be meaningless.

Traditional zoning (“Euclidean” zoning) separates incompatible land uses and imposes density restrictions, and has been used since the 1920’s. Several more recent innovations offer more flexibility than traditional zoning, and have implications for TDR:

- Incentive Zoning: “Incentive zoning encourages developers to meet specified public objectives in development by offering advantages in the form of density bonuses, more flexible design treatment, and more expeditious processing of approvals.” (Porter, 1997, p. 50) For example, the developer may be allowed to exceed height limits by a specified amount in exchange for providing open spaces or plazas adjacent to the building (CFTE, 2004). Like density bonuses, cluster zoning can be viewed as a form of incentive zoning. Cluster zoning “allows groups of dwellings on small lots on one part of the site to preserve open space and/or natural features on the remainder of the site. Minimum yard and lot sizes for the clustered development are reduced. Like PUDs, site designs are subjected to more detailed reviews.” (Porter, 1997, p. 26.)

- Performance Zoning: Like overlay districts, performance zoning is a type of flexible zoning. “Performance zoning employs standards and criteria – rather than prescribed lists of uses and requirements – that allow more choices among potential land uses and design treatments. Standards and criteria set limits to the impacts of land uses to assure compatibility among adjacent land uses and encourage development in preferred locations.” (Porter, 1997, p 50) In other words, it deals not with the use of a parcel, but the performance of a parcel and how it impacts

surrounding areas (Tyler, 2004). Flexible zoning's "performance provisions are rarely applied to all zoning districts but are often used for selective locations or types of uses (e.g., PUDs)." (Porter, 1997, p. 26)

□ Planned Unit Development: "An optional procedure for project design, usually applied to a fairly large site. It allows more flexible site design than ordinary zoning would allow by permitting options or relaxing some requirements...." PUDs almost always require special review procedures (including design reviews) to approve these variations from normal requirements." (Porter, 1997, p. 26, 50) PUD provisions often require developers to compensate for the impacts of their projects by setting aside significant and usable open space, providing infrastructure needed to service the development, or offering other community facilities and services. (Pace Law School, 2005)

Density bonuses provide a direct parallel to the use of TDR credits to achieve higher density in a Receiving Area. Rather than providing the density bonus in exchange for on-site public amenities like sidewalks or other design features, or in exchange for cash in lieu of such on-site amenities, TDR provides the density bonus in exchange for the protection of open space elsewhere in the jurisdiction as represented by the severed development rights. In fact, G.S. 153A-331 and 160A-372 specifically provide for local governments to require either provision of open space or cash in lieu in their subdivision ordinances. However, the caveat is that the open space provided is to serve the development and other developments. It is an open question as to whether this introduces a strict requirement that the open space provided be in close proximity, or whether the provision of open space that serves an entire jurisdiction (as in a large regional park instead of a smaller neighborhood park) is permitted.

Density bonuses have long been used by local governments in North Carolina, and are an accepted practice for local governments' regulation of land development. Orange County uses density bonuses to encourage Planned Unit Developments (PUDs) in the joint planning area and to encourage affordable housing development.

Cluster development is usually implemented through the zoning ordinance. Both TDR and cluster development involve shifting density from one location to another. Unlike cluster development, however, which shifts density from one portion of a site to another portion of the same site, TDR permits a density shift from one site to another, *non-contiguous* site. While landowners adjacent to cluster development are typically buffered from the higher density, a concern about TDR programs is the potential conflicts of increased density perceived by adjacent property owners. While similar to cluster development, TDR focuses on the densities of an entire program area (Machemer et al, 2000).

Chesterfield, NJ adopted a new Land Development Ordinance enabling TDR and changing the underlying zoning in the agricultural districts from 3.3-acre lots to 10-acre lots. A clustering option was added to the TDR program, giving a Orange County Transfer of Development Rights Feasibility Study

density bonus in exchange for preserving 50% of the property as open space. The planned village received a Smart Growth Planning Grant. Chesterfield's well-defined vision has allowed it to make regulatory changes, garner state grants, make strategic infrastructure investments, and attract private participation. (Smart Growth Gateway, 2004)

TDR can be viewed as utilizing a form of performance zoning in that most TDR programs limit the number of TDR credits that can be used on a Receiving Area site in order to control the impacts of increased intensity of use. The concern with managing impacts on the adjacent parcels and surrounding area is one parallel between performance zoning and TDR. A second parallel is the application of the performance standards to some but not all underlying zoning districts, which may be likened to the designation of sending and Receiving Areas in a TDR program. If local governments have the authority to use performance zoning, then they must have the authority to establish limits on TDR credit usage in Receiving Areas and to designate Sending and Receiving Areas.

3. *Impact Fees*

Although impact fees are widely used elsewhere in the Country, they are not common in North Carolina. In part, this is due to uncertainty about whether their use by local governments in North Carolina is authorized under existing statutes or requires specific permission from the General Assembly. A bill was introduced to the General Assembly in 2003 to provide statewide enabling of impact fees for local governments, but it did not pass. Both Orange County and Durham County use impact fees, but only Orange County has received specific permission to do so from the General Assembly. Durham County has been sued because of this, and although both the lower courts and the N.C. Court of Appeals have declared Durham County's impact fees to be illegal because of the absence of permission from the General Assembly, Durham County plans to appeal to the N.C. Supreme Court.⁹

Even though Orange County has explicit permission to use impact fees, this current controversy over whether impact fees can be legally implemented by City or County governments, suggests an explanation of the difference between TDR and Impact Fees is necessary.

Impact fees can be defined as a one-time charge to a developer for new residential construction, and are usually imposed by local governments, such as counties and municipalities. The basic purpose of the impact fee is to pay for local government costs associated with the building of the new homes that are not covered by residential taxes. Impact fees are said to close the gap between residential taxes and the actual costs to local governments of new residential

⁹ *Durham Land Owners Ass'n v. County of Durham*, 630 S.E.2d 200 (N.C. App.2006)
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construction. Some of these things include schools, roads, and water and sewer utilities.¹⁰

An example of a traditional impact fee would apply to a residential developer who builds new homes. The developer will be assessed a per lot fee for impacts. The fee may be assessed by home square footage, family size, or various other methods which quantify the amount of public resources associated with construction and occupancy of the new home.

When new homes are built with impact fees in place, the developer is required to pay the extra charges assessed. Debate exists as to the result of imposing impact fees. On the one hand, they may be passed on to the consumer and are said to drive up the price of housing. Alternatively, the developer may seek to purchase land at a lower price, putting downward pressure on land prices or to simply absorb the additional cost incurring a loss of profit.

Since TDR is a means by which a community alleviates the “impact” of increased density by requiring open space provision in exchange for the increased density, can it be construed as a form of impact fee? One key to distinguishing TDR from impact fees is whether the use of TDR in a Receiving Area is voluntary or required. As mentioned before, TDR is usually closer to a form of a density bonus because of the way additional density is awarded in exchange for voluntary provision of a public good. In the case of impact fees, the developer is required to pay additional charges for impacts, while with TDR the developer usually has the option of purchasing additional density or of developing at the density allowed under the existing zoning. The line between TDR and impact fees would be blurred if use of TDR were required in order to develop at all. In that case, an argument could also be made that requiring use of TDR is akin to requiring dedication of roads, sidewalks, public open space, or other public facilities, which local governments are permitted to do. This is, however, an argument that would likely be decided in the courts.

4. *Other N.C. Regulatory Programs*

Similar to TDR concepts, the N.C. Division of Water Quality uses “density averaging of noncontiguous parcels” that is based on the idea that development plans for a pair of parcels can be submitted together and treated as a single development project for purposes of regulation. The amount of development allowed for the paired parcels can not exceed the amount of development that would be allowed if the parcels were developed and reviewed separately for compliance with water supply watershed protection regulations. This density averaging is an option that is available to local governments through the water supply rules [15A NCAC 2B .0104(u)], an

¹⁰ See “A Primer on Residential Impact Fees” by Michael Walden at <http://www.ag-econ.ncsu.edu/faculty/walden/walden.htm>
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example of density shifting authority that has been delegated to the local governments (NCDWQ, 2005).

D. Other Legal Issues

Two other legal issues that arise in considering TDR in North Carolina involve a) the status of severed development rights, and b) the operation by a local government of a TDR Bank. The first issue affects whether severed development rights can be allowed to “float” unattached to any parcel of land (or must instead be immediately transferred to a receiving parcel of land.) It also raises the question of what form of property these “floating” development rights are under N.C. law, and whether they are taxable or not. The second issue raises the question as to whether the operation of a TDR Bank is a “public enterprise” as defined by the N.C. statutes, and, if it is, whether it is among the list of enumerated enterprises that N.C. local governments are authorized to operate. This second issue is rendered moot if the first issue is answered in the negative, that is, that severed development rights may not be allowed to “float.”

Although existing N.C. legislation identifies severed development rights in connection with highway rights-of-way projects, and even specifies their tax status, there is no legislation specifically addressing the issue of “floating” development rights as part of a local TDR program. Since only the state legislature has the authority to create or recognize a new form of property, the conclusion must be drawn that local governments in North Carolina may not establish a TDR program in which severed development rights are not immediately reattached to a “receiving” parcel. Thus, the question of local government operation of a TDR Bank is currently rendered moot in North Carolina.

III. Conclusion

While the constitutionality of TDR programs has been upheld in cases across the nation, the absence of statewide enabling legislation for TDR in North Carolina means local governments must fit any proposed TDR program within the framework of existing authority granted to them by the State. This study has examined that framework and concludes that, within certain limitations, the County may create and operate a program that accomplishes a transfer of development rights from one property to another (a TDR program):

- The County can rely on its existing authority to:
 - Purchase conservation easements** from private property owners;
 - Award density bonuses** for provision by a developer of amenities, public facilities or other public services identified by the County as going beyond the minimum requirements established in its ordinances for land development and that serve the public good and help the County meet its land use and other public policy goals and objectives;

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- **Adopt land use regulations to:**
 - **Designate areas** or properties eligible to sell conservation easements to the County (Sending Areas) and areas or properties eligible to receive a density bonus (Receiving Areas);
 - Establish **minimum eligibility criteria** for Sending Area properties;
 - Establish **maximum density bonus limits** for Receiving Area properties; and,
 - Establish **varying levels** of Receiving Area density bonus for easements on different Sending Area properties, based on the extent to which a property meets or furthers important County policy objectives.

Together, these existing authorities allow the County to create a program that effectively accomplishes a transfer of development rights from one property to another.

- Unless it obtains special authorization from the General Assembly, **the County may not:**
 - Allow development rights to “float” (without being immediately attached to a Receiving Area property once they have been severed from a Sending Area property through a conservation easement);
- Unless it obtains special authorization from the General Assembly, **the County should avoid:**
 - Establishing pre-set easement acquisition prices and pre-set density bonus fees; instead, the County **should allow private market negotiations** between Sending and Receiving Area property owners to determine the dollar value of the transactions while the County determines the amount of density bonus awardable for meeting specified Sending Area preservation criteria.
- **Municipalities** may enter into agreements with the County to participate in a TDR program that fits the parameters outlined above;
 - However, municipalities may prefer to obtain special authorization from the General Assembly clarifying that their authority to award density bonuses for provision by a developer of protected open space extends to open space that is provided outside of their jurisdiction and in a location not adjacent to or within walking distance of the property receiving the density bonus.

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PROGRAM AND ADMINISTRATIVE DESIGN ASSESSMENT

Section 2 assesses the program and administrative design options available for a potential TDR Program. Program design issues are covered first, followed by Administrative design issues.

Program design refers to the rules and regulations that define the TDR program as established by the community. These are choices the community makes about what land is included in the Sending and Receiving Areas, how TDR credits are awarded to Sending Area properties and how they are allowed to be used when transferred to Receiving Area properties. Sub-section 1 provides a listing of important design considerations to be addressed in order to effectively implement and maintain the program.

Administrative design refers to how the TDR program is managed and operated by the County. This includes issues such as staff organization, record keeping requirements, and public communications. Sub-section two discusses administrative considerations.

I. TDR Program Design

Ten key questions relating to TDR program design are listed below. Each is briefly discussed to highlight the implications of the program design choices they represent.

1. Primary Purpose. *What is the primary purpose(s) of the TDR program (farmland preservation, aquifer protection, compact growth, etc)?*

As many TDR programs as there are in the Country, an equal number of reasons exist for having them. Orange County's purposes for its TDR program may include a single objective, such as farmland preservation, or multiple objectives including historic preservation, watershed protection, and encouragement of compact development. The purposes of the program should then be reflected in the way the program is designed, especially regarding eligibility for participation, but also including the awarding and use of TDR credits.

Definition of the Sending Area should reflect the County's agreed upon goals and requirements for sustainable growth and preservation as identified in the Comprehensive Plan's Land Use Element. As a tool for preservation, TDR relies heavily on the appropriate choices for potential Sending Areas. During the Task Force process, the following criteria were identified for determining potential Sending Areas scenarios (although it should be emphasized, the purpose of this exercise was not to define actual Sending Areas, but to help explore the economic feasibility of various ways of defining potential Sending Areas):

2.0

SECTION

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- Water Supply (Critical and Protected Watershed)
- Stream Buffers
- Wetlands
- Prime Farmlands (Prime Soils for Farm Production)
- Existing Farmland
- Forest (Especially Mature Hardwoods)
- Habitat Corridors
- Natural Heritage Inventory Areas
- Rural Buffer zones
- Historic Sites (Parcels Containing Historic Sites)

Existing parks, either private or public, voluntary agricultural district parcels, and private land trust easement parcels were not considered as potential Sending Areas due to existing protection measures already in place by Orange County or state/federal laws. TDR seeks to preserve *unprotected* land and would not be applicable to locations that are already protected.

Similarly, Receiving Area designation will need to reflect the development and land use goals of the County. Consideration will need to be given to the impact of further growth in potential Receiving Areas. Again, utilizing the Comprehensive Plan's Land Use Element will assist in assuring that goals and objectives are clear. During the Task Force process, the following criteria were identified for determining Receiving Areas scenarios:

- Rural Activity Nodes
- Neighborhood Commercial Nodes
- Planned Urbanizing Areas
- Transition Areas
- Economic Development Districts
- Proximity to Transportation Corridors
- Septic Suitability
- Proximity to Existing Development
- Proximity to Services
- In Coordination with Small Area Plan Goals
- Proximity to Defined Re-Developable Areas

This listing could be expanded or contracted as program implementation and review dictates. For the development community, the primary incentive for opting into a TDR program and purchasing TDR credits for use in a Receiving Area is to increase the allowed intensity of development on a Receiving Area property. The cost of the purchase must therefore be less than the incremental profit anticipated from the increased development intensity. It must also be less than the cost of other available means of achieving the same level of density bonus.

2. *Participation Eligibility.* *Should the program permit the sale and purchase of credits based on mapped regions of the county or use a county-wide criteria-based system to determine participation eligibility?*

Sending and Receiving Areas can either be specific areas shown on a map similar to a zoning map, or they can be defined on a parcel-by-parcel basis using a criteria checklist to determine each parcel's eligibility. Generally, mapping specific areas is simpler to understand and implement. The drawback is that in drawing the boundaries for specific areas, some land that would score high based on criteria will necessarily fall outside of the mapped Sending or Receiving areas, while some that scored low conversely fall inside those areas. Criteria-based approaches place more emphasis on the importance of the criteria and may be perceived as more equitable or fair, but they can also yield a more fragmented or patchwork result if the majority of properties that score high do not happen to cluster together, and are certainly more labor-intensive to administer.¹¹

An additional option could be that of rendering the entire area within the County's jurisdiction as a potential Sending Area, other than those areas specifically designated as Receiving Areas (except for historic properties/structures, which could be small exclusions within a Receiving Area). This approach is the simplest and easiest to understand, but it does result in Sending Area properties with a very wide range of land values. Depending on the design options chosen in the awarding of TDR credits, this could result in TDR transfers occurring preferentially from the lowest-valued Sending Area properties, which are likely to be those farthest from the municipalities. The unintended consequence is that areas of high value for preservation could still be left unpreserved.

Finally, the Sending and Receiving Areas cannot be designed totally independently of one another. A successful TDR program strikes a good balance between sending and receiving properties to participate in the program within the County's jurisdiction. If there are not enough Receiving Area properties available, then Sending Area property owners will not have a sufficient market for selling their development rights, the price of Sending Area TDR credits will be depressed, and consequently those property owners won't choose to use TDR to protect their land from future development. The TDR program may depend on the cooperation of local municipalities to provide sufficient Receiving Area land and thus demand for TDR credits. On the other hand, if there are not enough Sending Area properties available, then the price of development credits could become inflated, deterring developers from buying credits for Receiving Area properties.

3. ***Sending Area Credit Allocation.*** *How should the County award TDR credits to Sending Areas? Should they be based on a fixed formula (X credits per acre) or vary according to a set of criteria (taking into account soils, wetlands, and other "preservation merit" criteria)? Should existing structures on a property count against the number of development rights allocated to a Sending Area property?*

¹¹ For a visual reference to Sending Area options, see Technical Appendix F.
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TDR credits could be awarded to Sending Area properties using a fixed formula for credits per acre or per allowable housing unit, or they could vary according to the number of criteria that a site meets (i.e. soil type, proximity to similar uses). Once again, the first option is simpler and easier for potential participants to understand, while the second option may be perceived as “fairer”, since it recognizes that some properties may have more preservation merit than others.

Depending on how high the current density on a parcel is relative to its allowed maximum under Orange County zoning regulations, there may or may not be much “vacant” or “undeveloped” land on the property to be preserved. In some TDR programs, the allowable density of the existing zoning is used to determine how much of that density is “used up” by the existing structures (e.g., a farmhouse or farm buildings), and the TDR credits are awarded on the basis of the remaining allowable density. Another option is to overlook existing structures (up to some defined limit) in the TDR allocation calculation, effectively providing a “bonus” to the property owner as an incentive to participate in the TDR program.

4. Receiving Area Credit Use & Density Limits. *How should TDR credits transferred in to a Receiving Area property be used to increase density of development? What limits would be placed on the density allowable on a Receiving Area property using TDR credits?*

The most straightforward approach to using TDR credits in Receiving Areas is to allow each TDR credit to equal one additional housing unit. So, a 30-acre parcel zoned for three units per acre would need to transfer in 30 TDR credits to go to four units per acre, or 60 TDR credits to go to five units per acre. Another option is to incorporate a criteria-based formula that allows each TDR credit transferred in to equal more than one additional housing unit based on how many criteria the Receiving Area property meets. This would allow the County to direct more TDR development to the Receiving Areas that are its highest priority for increased development.

Human health and quality of life concerns dictate that some limit be placed on the additional density that can be transferred into a Receiving Area property through the purchase of TDR credits. The simplest approach would reflect a predetermined density bonus limit that could be applied to all potential Receiving Area, as opposed to a criteria-based approach that would yield varying bonus limits. However, if the County desired to value certain Receiving Areas over others, allowing a varying scale of density bonuses could serve to heighten the demand of these locations. As with Sending Area considerations, the more flexible criteria-based approaches may be viewed as too complex and thus present a barrier to participation in the TDR program. A balance between the development goals of the County

and market considerations will need to be met to ensure that unintended consequences do not arise.

5. *Allowing Commercial Uses of TDR Credits.* *Should credits be used for both residential and commercial uses in Receiving Areas, regardless of the uses permitted on the Sending Area property?*

While development rights transferred from residentially-zoned Sending Areas are most commonly used in Receiving Areas to increase allowable residential densities, the rights may also be allowed to be used to increase commercial square footage or impervious surface, or to reduce parking requirements or relax building height restrictions.

Since commercial development represents a higher intensity of development per acre than residential typically does, this is one way that a TDR program can address an imbalance between a relatively smaller Receiving Area and a relatively larger Sending Area. The formulas for converting TDR credits from rural residential density allowances into commercial uses must be carefully designed to take into account the relative market value of each. For example, assume a typical three-bedroom, two-bath single-family dwelling in a residential subdivision is 2,500 square feet, and also assume that a Sending Area TDR credit that represents one housing unit has the same market value to a Receiving Area developer as a 1,500 square foot increase in allowable commercial floor space. Setting the TDR residential-to-commercial conversion formula at anything below 1,500 square feet of commercial space will discourage Receiving Area property owners from using TDR for commercial projects. Conversely, setting it much above 1,500 square feet may create enough demand for TDR credits from Receiving Area property owners that the price of TDR credits is bid up and the Receiving Areas end up absorbing less of the Sending Area development potential than hoped for (and less land is protected.)

6. *Incentives for Participation.* *What incentives, if any, should be built into the program to encourage Sending and Receiving Area participation?*

The most commonly-used incentive for Sending Area landowner participation is providing a density bonus in the TDR credit allocation formulas. The result is that more development rights are available for transfer through the TDR program than are allowed to actually be built on the property. In the absence of downzoning of the Sending Areas, these density bonuses are relatively modest (for example, from 1.5 to 2 times the density allowed by zoning,) and are not even always considered necessary. (See also the item below labeled “Downzoning.”)

Criteria-based allocation of Sending Area TDR credits can create a density bonus for those properties that score high on preservation criteria, and thus provide a higher incentive for those property owners to participate than for those whose property scores lower.

Depending on the relative area covered by the Sending Areas as compared with Receiving Areas, and the degree of Sending Area TDR credit absorption desired in the Receiving Areas, an incentive for Sending Area participation that increases Sending Area TDR credits relative to existing development potential may be counterproductive.

Participation incentives for Receiving Area property owners are often in the form of a multiplier applied to the TDR credits transferred in. For example, if TDR credits from Sending Areas typically represent one housing unit that could have been built in the Sending Area, the Receiving Area property owner may be allowed to transfer each credit in as two housing units' worth of increased development, representing a multiplier of two. Or, if conversion to commercial uses is permitted, the multiplier could be applied to the square footage of commercial space that equates in market value to the average residential housing unit.

In Orange County, the most important form of Receiving Area incentive may be providing a process for achieving intensified development that is more certain, less time-consuming and less costly to developers than existing processes.

Another form of Receiving Area incentive is downzoning. As with Sending Areas, the option to use TDR credits to regain "lost" development potential acts as an incentive to participation. The difference here is that the Receiving Area property owner must purchase TDR credits in order to achieve the level of development potential on his property before downzoning.

As seen above, the use of a criteria-based scoring system can also provide an incentive for high-scoring Receiving Area properties, whether it is used to determine the value of TDR credits transferred in to varying Receiving Areas, or used to determine the density limit applied to different Receiving Area properties.

Other incentives for the use of TDR credits in Receiving Areas may be incorporated into a program's design, such as fee or regulatory exemptions (e.g., an exception from having to provide an otherwise required site amenity or other development charges.) This option should be carefully balanced against the desire to control the quality and character of higher-than-normal density of development, as noted in the next item.

- 7. Allowable Land Use & Development Restrictions.** *Should participating properties (both Sending and Receiving) be subject to additional development restrictions or requirements affecting practices such as farming, landscape buffers, site work, or the inclusion of amenities?*

Beyond allowable built densities on a Sending or Receiving Area site, a TDR program may consider applying additional development regulations to a Sending or Receiving Area property. For instance, participation as a Sending Area property will involve establishing a conservation easement on the property that may also regulate the way an owner farms, grades a property, or removes/alters natural resources such as wetlands or woodland. Many existing programs have specific, listed allowable uses for Sending Areas. The conservation easement would define what Sending Area owners would be allowed to do on the land after sale of TDR credits. No two programs appear to have identified the same allowable uses; however, most reflect a restricted density of development, type of use, and type of development.

In the Receiving Areas, property owners could be additionally required to follow design guidelines that serve to ensure that the higher intensity of development is of high quality and fits with the character of the community. They could also be required to provide common open space amenities or public infrastructure. Such requirements will change the costs of the project, its market pricing, and potential profit, and so will need to be carefully balanced against the cost-benefit implications of the TDR “density bonus” to avoid presenting a barrier to TDR participation.

8. **Downzoning.** *Will it be necessary to downzone regions of the County, to provide incentive for the sale and use of TDR credits? Or, if downzoning is contemplated as part of the Comprehensive Plan’s Land Use Element and consequent zoning revisions, can TDR alleviate the impact of that on property owners?*

If properties in the Sending Area are down-zoned as part of the revisions to the zoning ordinance following adoption of a revised Land Use Element, some landowners may be concerned that their property’s value will decrease. Whether a decrease in values follows a downzoning depends very much on the degree of downzoning employed. There is evidence that a modest downzoning that merely reflects the buildable density of the land (as opposed to an artificially inflated allowable density) will not decrease land values. On the other hand, a significant downzoning (for example, from 0.5 units per acre to 0.05 units per acre), applied to properties near desirable urban jobs and amenities, will likely be reflected in a decrease in property values.

Downzoning in the Receiving Areas is also used in some TDR programs to provide an incentive to participation, with the use of TDR credits restoring the Receiving Area property to its pre-downzoning level of allowable density. (See the item above labeled “Participation Incentives”.) There is a tension between the concept of downzoning a Receiving Area and the usual desire of a community to “give away” additional density allowances in areas where it wants to encourage more development (or at least not put hurdles to more development.) Downzoning a Receiving Area makes the most sense in

places where there is little or no market demand for density higher than the existing zoning allows.

TDR has been used as a way to provide significantly downzoned property owners with an option for recouping the “lost” value of their property by awarding them TDR credits that equal their property’s allowable density prior to the down zoning. It is important to note that some cases have utilized an update to an existing land use plan, which did result in downzoning, without relying on a TDR Program to initiate a downzoning process. At the time of this feasibility study, the County is considering modest downzoning as part of its land use plan update. While this may assist in encouraging TDR involvement by property owners, the downzoning process would not be a result of TDR implementation.

9. ***Re-Purchase or Re-Attachment.*** *Should the program permit the re-purchase and re-attachment of development rights after they have been severed from a Sending Area property?*

It is important for the Sending Area property owner to know whether they have the eventual option of buying back the development rights that they have sold. There may be hesitancy on the part of the landowner to participate if they feel they can’t buy back the right to develop additional units after a conservation easement has been placed. On the other hand, the community may feel that achieving permanent preservation of Sending Area properties is a goal that overrides that concern. Currently, when landowners enter into conservation easements with a private land trust, or through the County’s Land Legacy program, the easements can only be “undone” with the consent of the easement holder (either the land trust or the County.) This is an extremely rare occurrence, requiring lengthy negotiations, and is accompanied by the landowner’s placing an easement on a property of equal or better size and preservation merit.

10. ***“Floating” Credits.*** *Should TDR credits severed from Sending Area properties be allowed to “float” until a buyer decides to apply them to a Receiving Area property, or should severed credits be required to be immediately applied to a Receiving Area property?*

The legal assessment indicates that, in the absence of statewide enabling legislation providing for such “floating” TDR credits, this is not a feasible program design option in North Carolina. (See the Legal Assessment Section of this report.)

II. Flowchart of Major Decision Points

With the wide array of legal, administrative and program design questions raised in the feasibility study, a flowchart was devised to focus the order and nature of the necessary decisions. The list below offers additional detail to the boxes in the flowchart, shown below in Figure 2-1. Not every option in the list is shown on the flowchart since not all options are viable under each scenario.

Legal Authority:

- Under existing statutes vs. Under local enabling legislation vs. Under statewide enabling legislation

Program Participation:

- County only vs. County and municipalities
 - o Selected municipalities vs. All municipalities
 - o Municipalities share planning vs. Municipalities accept credits
- Transactions approved by Administrative review vs. by Quasi-Judicial Board review
- TDR information and transactions processing by single county agency vs. multiple agencies

Orange County Role:

- Open market only with no County role vs. Open market with County brokerage vs. County TDR Bank only (no private market) vs. Both Open Market and County TDR Bank as options, with or without County brokerage

Administration/Program Design Options:

- Downzone sending and/or receiving areas concurrent with TDR vs. No downzoning
- Land use transfer permitted (e.g., residential to commercial) vs. Residential to residential uses only (shown in decision tree)
- Distinct, mapped sending and receiving areas vs. Criteria checklist allowing overlap
- Sending area credits awarded based on uniform per-acre formula vs. Based on variable criteria
- Receiving area credits awarded based on uniform per-acre formula vs. Based on variable criteria
- Number and relative value of sending area credits in ratio to receiving area credits approximates 1:1 balance vs. More sending area credits than receiving area vs. Fewer sending area credits than receiving area (shown in decision tree)

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Figure 2-1. TDR Program Decision Flowchart
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III. TDR Administrative Design

The manner in which the TDR program is administered can have a substantial impact on its overall success. Nine key questions relating to TDR program administration are listed below. Each is briefly discussed to highlight the implications of the options they represent.

1. **Administrative Approval.** *Should the program be administratively processed or should individual transactions be subject to board approval?*

Administrative approval means that specified staff members are authorized to approve or deny TDR applications based upon specific requirements laid out in the TDR program rules and regulations formally adopted by the County Commissioners. Public hearings are not required for each TDR transaction, and neither the Planning Board nor the Commissioners votes on each TDR transaction. This approach is intuitively appealing to property owners since it provides a high degree of certainty about the likelihood that their transaction will be quickly approved. Thus, this approach presents little or no barrier to participation. The community as a whole may, however, not be willing to rely on a list of requirements to adequately protect the public good in all transactions, and may want to insist on some form of review by elected or appointed officials in addition to staff review and recommendation. This may be particularly true when the program is new and the community has no experience with the kinds of exceptional cases that may arise.

If the transfer process is to be approved by a governing body, such as the County Commissioners, then there may be significant implications in the following manner:

- the increase in time it takes to process the TDR transaction;
- levels of review required that introduces uncertainty to the TDR transaction process; and
- the number of staff needed to manage the process.

The additional time and uncertainty as to outcome of this type of process will not be as attractive to property owners and developers as an administrative process, and may act as a barrier to participation. If the TDR process is viewed as being equally, or more, difficult than the existing permitting or re-zoning processes, then Receiving Area property owners will be discouraged from participating. County government will need to determine if the process of oversight will cause unintended consequences within the market.

2. **County Involvement.** *Should the program be operated through the private market, without County involvement, or should the County function as a participant that purchases TDR credits (actively buy and sell development rights)? Should the County act as a broker for TDR credits between*

landowners, or in any way facilitate private market buyers and sellers finding each other?

There are examples of TDR programs that operate solely through the private market, those that operate solely through governmental purchase and sale of TDR credits, and those that do both.

In the private market model, Sending Area property owners would sell their TDR credits directly to Receiving Area property owners, and the County's role would be limited to certifying the TDR credit allocation to the Sending Area property, approving the transfer of credits to the Receiving Area property, recording appropriate deed restrictions on each property, and becoming the holder of a conservation easement on the Sending Area property. The County would neither buy nor sell TDR credits. Real estate brokers would help private buyers and sellers find each other and reach an agreed-upon price.

In the government-run model, the County is a "TDR Bank", acting as an intermediary between Sending Area TDR sellers and Receiving Area TDR buyers. Private market sales are not authorized. The County may either negotiate prices with each party, or it may establish pre-set prices. The County retains its roles in certifying the TDR credit allocations, approving the credit transfers, recording deed restrictions, and holding the resulting easements. Prospective buyers and sellers find each other by applying to the County.

Many programs allow for a combination of public approval and market trade. In North Carolina, in the absence of statewide TDR-enabling legislation, a hybrid approach is the best available option. Private market transactions cannot be completed without the County's involvement, nor can the County act as a TDR bank. This is primarily because of limitations in N.C. preventing the creation of "floating" TDR credits.

This N.C. hybrid would look like this: individual buyers and sellers find each other, either through a County-sponsored clearinghouse or with the help of real estate brokers (or both); they jointly apply to the County for approval of their proposed transaction; the County's adopted TDR regulations determine whether prices are pre-set by the County or are a private matter between buyer and seller; the TDR credits are severed from the Sending Area property and immediately attached to the Receiving Area property in one transaction recorded by the County; the conservation easement is simultaneously recorded on the Sending Area property.

The County may include an option for Sending Area property owners to apply for "pre-certification," indicating that the property is within a County-designated Sending Area and specifying the maximum number of TDR credits it is eligible to be awarded (pending, of course, final certification as of the transaction date, to ensure no change in the property's development

status between the time of certification and the transaction date.) Receiving Area property owners may then decide to enter into “TDR purchase option” contracts with pre-certified Sending Area property owners as a way of securing the TDR credits pending final County approvals and the closing of the TDR transaction.

3. **Credit Pricing.** *Should the County set a fixed price for development rights/credits or allow market negotiations to determine the price?*

The County has the option to determine whether or not to set the price of credits or to allow the private market to determine prices. Setting prices can be accomplished in two ways: one uniform price per TDR credit is established for the entire TDR program, or, the price is established on a criteria basis that reflects the preservation merits of a particular Sending Area property. Initial concerns for setting the prices would be the possibility of either under-valuing or over-valuing the prices, with undesired consequences of either no transactions taking place or an unmanageable volume of transactions. In either case, this could be a negative aspect for both buyers and sellers. If the pre-set prices do a good job of approximating actual market value, however, a more stabilized market could be maintained, which may be attractive for potential participants in a TDR program. The possibility also exists that as a TDR program became more established, the county could opt to withdraw the pre-set pricing and allow market negotiations to determine prices thereafter.

4. **Management Responsibility.** *Will one department be responsible for managing or maintaining the program, or will it be coordinated among several departments? Can TDR be implemented without additional staffing and/or public funding?*

From the vantage point of TDR participants, a “one-stop shopping” approach to TDR transactions would probably be preferable. This means that one set of County staff has in-depth knowledge of all aspects of the TDR program, can answer questions and guide potential participants as they gather information to decide whether they wish to participate, and would handle the actual transactions.

From the County’s vantage point, there may be efficiencies in having existing staffs in multiple agencies handle the aspects of the TDR program that fits best with their existing expertise and procedures. It would be imperative that the program provide the public with very clear instructions about the appropriate sequence of actions needed to complete a TDR transaction and which departments or agencies handle each step in the sequence. Those instructions would need to be available at each department and at multiple other information points where TDR inquiries could be anticipated.

At least initially, some investment of resources will be needed to launch and operate a TDR program, to provide for additional manpower and expenses such as a public information program. In the longer term, if TDR is successful in fostering economic development in Receiving Areas, the increase in tax values of those properties may offset the decrease in tax values of participating Sending Area properties, creating a net increase in tax values and a resulting increase in tax revenues that can cover the program's ongoing staffing and other expenses. (Of course, some of the increased tax revenues from participating Receiving Area properties will still be applied to providing public services to those properties, but at a more economical cost than providing the same services to non-participating Sending Area properties if they were to develop to their full potential.)

5. **Municipal Involvement.** *How important is municipal participation to the program? If municipalities participate, will it be through joint planning of Sending and Receiving Areas, or only through cooperative agreements to accept TDR credits originating from each others' jurisdictions?*

The expectation is that a good bit, if not the majority, of the land that is highly suitable for acting as a Receiving Area will be within the municipalities' planning jurisdictions. Thus, if the municipalities do not participate in the TDR program, will there be sufficient Receiving Area-suitable land in the County's jurisdiction to make a viable TDR program? The economic analysis will help assess this question. Two factors make it possible for County-based Receiving Area land to be sufficient: the option to allow commercial TDR uses in the Receiving Areas, since that will "absorb" more Sending Area TDR credits; and, the option to include in the designated Receiving Areas smaller development centers noted as Rural Nodes on the County's Comprehensive Plan / Land Use Element.

Securing participation from the municipalities is likely to require time to negotiate the specifics of how they will participate. Different procedures, variations on zoning regulations and processes; varying goals for the TDR program; and different degrees of communication among the staff will create hurdles to be overcome if the municipalities elect to participate initially. Thus, the County may elect to proceed with a TDR program without municipal participation in order to gain experience with the program that can then inform longer-term discussions with the municipalities. This option would suggest that the County will designate initial Sending and Receiving Areas in its jurisdiction without formal agreement from the municipalities, but probably with informal input from them.

As individual municipalities decide to join the TDR program, additional Sending and Receiving Areas could be added to the program by mutual agreement (with the program becoming a jointly operated program), or the municipalities could designate Sending and/or Receiving Areas in their own

jurisdictions and then enter into agreements with the County for accepting TDR credits transferred from each others' jurisdictions.

Certainly, if any Sending or Receiving Areas are envisioned within the current Rural Buffer zoning district, which is subject to the Joint Planning Agreement with Chapel Hill and Carrboro, those municipalities would be involved in creating the Sending and Receiving Areas and defining the terms under which TDR credits would transfer from or to those Areas.

6. Program Implications. *What are the implications of a TDR program relative to other County programs and initiatives, especially those with similar purposes?*

The design and implementation of a successful TDR program will also need to consider implications for other County programs and policies that relate to preservation and development. For instance, the Lands Legacy program involves the purchase of development rights from land owners. A TDR program could be limited by or limit the success of Lands Legacy if the two become competing interests for purposes such as open space preservation or watershed protection. Conversely, they could complement each other and create more interest among landowners in participating in the County's land preservation programs.

The implications of TDR for each of seven County programs or initiatives that might be affected by a TDR program are covered in depth in the "Program Evaluations" section of this report.

7. Coordination with Long-Term Goals. *Can the TDR program be designed without having completed the Comprehensive Plan Land Use Element update or can they be concurrent? Can TDR be implemented without changes to existing zoning ordinances?*

The County should consider its long-term goals as found in the Land Use Element of the Comprehensive Plan when making decisions about Sending and Receiving Areas. In conducting this TDR Feasibility Study, discussions were held with the Planning Staff responsible for the Comprehensive Plan update process to determine the extent and direction of changes, if any, to the existing Land Use Element. To date, no significant changes that would conflict with a TDR program are envisioned for the Land Use Element. If the County decides to proceed with designing a TDR program, coordination between the two efforts should continue, as there are substantial opportunities to integrate the two that would benefit each. (Please see the "Program Evaluations" section of this report for a more in-depth discussion of the Land Use Element and TDR.)

TDR would most likely be implemented as a set of zoning overlays written into the zoning ordinance as an amendment, meaning the TDR provisions would be in addition to, not as replacements of, the existing zoning provisions. Thus,

the existing zoning would not necessarily need to change to accommodate TDR. Similarly, changes to existing zoning districts suggested as part of the Comprehensive Plan's Land Use Element revisions should not need adjustment as a result of TDR implementation, assuming the two processes are conducted collaboratively.

8. **Public Awareness.** *What sort of public awareness and education should be conducted to maximize the use of the TDR program and who should administer it?*

The initial success of a TDR program depends greatly on the way it is marketed and then maintained. TDR is a relatively complex concept and is new to North Carolina, so neither the general public nor potential participants can be expected to understand it without significant and ongoing information support. The County should expect to invest in educating property owners and other residents about the program's features and processes, and the potential benefits both to individual participants and to the way the community will develop. This will be necessary not just for the process leading up to adoption of TDR zoning overlays, but to cultivate awareness and support for the program's budget after its adoption, and to cultivate interested participants and help them through the TDR process. Not only multiple events, but multiple media will be needed to accomplish the TDR communications objectives. Hence, public outreach should be a significant portion of the TDR program design process.

9. **Evaluation.** *Who would be responsible for evaluating the success of the program? How should the progress of transfers and protected properties be monitored and reported?*

Ultimately, the County Commission will determine whether the TDR program is meeting the objectives set for it. These efforts will need to be ongoing, from the program design phase, through implementation, and periodic reevaluations after the TDR program is established. The Commissioners will want to establish both quantitative and qualitative measures of success, and will receive a report on those measures from Staff. Determining which department will be responsible for reporting to the Commissioners on the TDR program may depend on whether the program is organized within a single department or agency, or shared among several departments. The decision to maintain a database of TDR activity and publish reports for the public could require additional funding and staffing. Measures of success could include number of completed TDR transactions, number of TDR credits transferred, number of pre-certifications issued, and number of TDR transaction applications pending.

SENDING AND RECEIVING AREAS ASSESSMENT

Section 3.0 discusses the origination, development, and production of:

- Sending and Receiving Area Criteria Items
- Sending and Receiving Area Scoring Maps
- Sending and Receiving Area Scenarios

This section will provide information on the formulation of Sending and Receiving Area criteria and how this information was developed into visual maps depicting results of a county-wide scoring model for both potential Sending and Receiving Area locations. A discussion will then be provided on how the county-wide scoring model was developed into a specific product of three mapped scenarios which would then be incorporated into the economic modeling procedure.

Important Note: The Criteria listing, Scoring Models, and hypothetical Scenarios do not represent the actual Sending and Receiving Areas that might result from the more detailed process that would follow should the County decide that a TDR program is not only economically feasible, but legally and administratively feasible as well. Neither do they represent “recommended” options, but have been selected solely to represent the range of possible options for eventual design of a TDR program, with the aim of assessing the range of economic feasibility for a TDR program.

I. Purpose for Sending and Receiving Area Scenarios

In order to provide a more accurate depiction of potential locations and extent of Sending and Receiving Areas to be assessed by the County in determining the feasibility of a TDR program, a method was developed for visualizing the County’s values, planned goals, and existing resources. This process involved the formulation of criteria, both for potential Sending and Receiving areas, that could be incorporated into the Economic Model for analysis and determine how each potential coverage of Sending/Receiving Areas could be estimated to effect the County’s economic outcomes.

The importance of developing a criteria list and scoring the listing (displayed in map form found in Appendices D and E) is to better quantify the existing values and future goals as directed by the Task Force and County staff. Once developed, the Scoring Model maps provide the basis for determining alternative Scenario Maps that represent what the TDR coverage for the County may be developed into. The final step in this process is found in the output of the Economic Modeling, wherein each Scenario was evaluated to determine its

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potential impact to the generation and absorption of TDR credits. The following subsections will provide a more detailed account of the criteria development process, scoring model process, and resulting potential scenarios.

II. Sending Area and Receiving Area Criteria Development

A. Criteria Development Process

For an analysis to take place in determining the feasibility of a TDR program, the Task Force and Orange County staff developed a listing of relevant criteria that reflected existing, potential, and planned for items that could be mapped throughout the County.¹² The Task Force was asked to consider specific questions as it related to TDR and the impact a potential program could have on the County's present and future resources or goals. Some of the concerns raised during the Task Force meetings are listed, as follows:

- What are the pros and cons to the following options for designating Sending Areas?*
 - Entire county eligible as Sending Area
 - Criteria used to qualify a property as a Sending Area
 - Specific areas of the county excluded from being Sending Areas (i.e. Receiving Areas, areas farther from growth pressures)
- What are the pros and cons to the following options for awarding development credits to Sending Areas?*
 - Fixed formula (x credits per acre)
 - Vary according to a set of development suitability criteria (i.e. soils, watershed)
 - Existing structures on a Sending Area property count against the number of development rights allowed there
- What are the pros and cons to Sending Area properties being subject to additional development restrictions or requirements affecting practices such as farming or viewshed buffers?*
- What are the pros and cons to the following options for the sale of Sending Area TDR credits?*
 - All development rights on a property must be sold at once
 - Portions of allowed development rights can be sold
- What are the pros and cons to the following options for designating Receiving Areas?*
 - Entire county's jurisdiction eligible to be Receiving Areas
 - Criteria used to qualify a property as a Receiving Area
 - Specific areas of the county excluded from being designated as Receiving Areas (i.e. Sending Areas, sensitive properties)

¹²

- What are the pros and cons to the following options for awarding Receiving Area development credits?
 - Fixed formula (x credits per acre)
 - According to a set of development suitability criteria (i.e. soils, zoning)
 - Limits on the density allowable on a Receiving Area property
- What are the pros and cons to the following options for adding development restrictions or requirements to Receiving Area properties?*
 - No additional requirements or restrictions than stated in existing zoning ordinances
 - Development restrictions or requirements in participating Receiving Area properties, such as site work or the inclusion of amenities (i.e. open space, infill, affordable housing)
- What are the pros and cons to using TDRs for either residential or commercial land uses on a Receiving Area property, regardless of the Sending Area property's original land use?*

B. Criteria Listing

During Task Force meetings, members discussed both the expected and current issues for areas throughout the County and arrived at the following listing of criteria. For both the Sending and Receiving Areas, more criteria were requested by the Task Force than could be incorporated into the model due to restrictions in availability of required GIS files. The requested GIS files that could not be obtained by either Staff or the Consultant are included in the following listing for informative purposes only. Receiving Area criteria are shown first, followed by Sending Area criteria.

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Figure 3-1. Receiving Area (Development) Characteristics Important to Orange County

<p>1. Rural Nodes on land use plan</p>	<p>Rural Activity Node polygons from land use plan layers</p>	<p>Planned Rural Nodes This map shows the location of rural neighborhood and rural commercial nodes from the County's Land Use Element of the Comprehensive Plan.</p>
<p>2. Neighborhood commercial nodes on land use plan</p>	<p>Commercial Node polygons from land use plan layers</p>	<p>Planned Commercial Nodes This map shows the location of commercial, industrial and commercial/industrial nodes from the County's Land Use Element of the Comprehensive Plan.</p>
<p>3. Planned Urbanizing/Transition Areas</p>	<p>Transition Areas from land use plan layers, both 10-yr and 20-yr</p>	<p>Planned Urbanizing Transition Areas This map shows the location of transition areas from the County's Land Use Element of the Comprehensive Plan. These are areas expected to transition from primarily rural to more urban.</p>
<p>4. Economic Development Districts</p>	<p>Economic Development zones as defined by the Orange County zoning layer</p>	<p>Economic Development Districts This map shows economic development districts designated in the County's Zoning Ordinance.</p>
<p>5. Near transportation corridors</p>	<ul style="list-style-type: none"> • Within 1250' distance of major roads (defined as Interstates, US and state highways) • Within 1000' distance of potential transit stops • Within 2500' distance of important intersections 	<p>Transportation Corridors This map shows areas that have good access to important transportation facilities. This is defined as areas that are within 1,250 feet of Interstates 40 and 85 and U.S. Highway 70, or within 2,500 feet of Interstate interchanges or rural nodes, or within 1,000 feet of the Hillsborough-Chapel Hill public bus route, or within 1,000 feet of potential light rail transit stops.</p>
<p>6. On septic-suitable soils</p>	<p>Identified by Soils layer as provided by Orange County. Soils with a septic rating of severe and moderate are displayed.</p>	<p>Soil Restrictions on Septic Tank Use This map shows the Natural Resource Conservation Service's ratings of the septic suitability of soils in Orange County. The ratings describe the degree of restrictions on use of septic tanks, ranging from moderate to severe.</p>
<p>7. Adjacent/contiguous to existing development where public services are already provided, e.g. water/sewer, schools, parks, social services</p>	<ul style="list-style-type: none"> • Within ½-mile distance of existing or planned schools • Within 1000 ft. distance of existing water lines • Within 1000 ft. distance of existing sewer lines • Within 500 ft. distance of existing or planned public parks <p><i>Note: for all of the above, "distance" is linear "as the crow flies", not travel time, although the linear</i></p>	<p>Existing Public Services This map shows areas that have good access to existing public services. This is defined as areas that are within ½-mile of an existing or planned public school, or within 500 feet of an existing or future public County or State park, or within 1,000 feet of existing public water or sewer lines. Note that data is only available to accurately map OWASA service area water and sewer lines. Approximate service areas are depicted for Mebane, Efland, Hillsborough, and Durham.</p>

	<i>distance may be set to approximate travel times.</i>	
8. Where retail services exist or are desired	Identified by utilizing Orange County's Zoning Ordinance layer.	Retail Services This map shows the location of commercial zoning districts from the County's Zoning Ordinance. These are areas where retail services already exist or where retail development would be encouraged by the County.
9. Re-developable Areas	Identified by utilizing the Orange County Parcel layer. Locations are specified by Orange County.	Re-developable Areas This map shows the location of selected areas that are already developed but have a high potential for future re-development. These are defined as either a) small parcels of one acre or less along an existing ½-mile long commercial corridor in Efland or Hillsborough, or b) parcels within a subdivision along Highway 54.
10. Where small area plans are in agreement with increased density	Identified by utilizing the Urban Transition Areas and Municipal Boundaries.	Small Area Plans This map shows the estimated extent of small area plans that are in process for Efland and Hillsborough. Until these plans are completed, no more specific criteria can be displayed indicating congruence of the plans, or lack thereof, with the designation of any portion of those areas as TDR Receiving Areas.
11. Away from ecologically sensitive areas, even in the municipalities	N/A – this is a negative criterion that will be applied after the positive scoring areas are identified; it will require carefully defining what the ecologically sensitive areas are.	

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Figure 3-1. (Continued)

<p>12. Into the Chapel Hill / Carrboro Rural Buffer if need be <i>Note: this criteria may conflict with the "avoid sensitive areas" criteria</i></p>	<p>NA – this is a neutral scoring criterion (i.e. don't penalize land in the RA scoring for being in the Rural Buffer, but don't give it extra points either); it can be assessed once the positive RA scoring is done and the positive SA scoring is done as well</p>
<p>13. Where existing residents support development or are accepting of increased density, potentially through additional design guidelines or environmental protections <i>Note: Locations meeting this criteria cannot be identified within the scope of this study, unless such a study has already been done</i></p>	<p>N/A</p>
<p>14. A couple of characteristics define what development in a proposed RA should look like rather than where it should be, and thus can't be used in a location scoring model:</p> <ul style="list-style-type: none"> • Compatible with community character & identity • Enhance small town identify/historic character of Hillsborough 	<p>N/A</p>
<p>15. Compact and defined <i>Note: this characteristic describes the overall shape and size of an RA, but not its location for use in a scoring model</i></p>	<p>N/A</p>
<p>16. Achieve goal of no 'net' overall county-wide density change after rural/sensitive areas are down-zoned <i>Note: this characteristic describes the policy outcome of the final definition of both sending and Receiving Areas, but not potential RA locations for use in a scoring model</i></p>	<p>N/A</p>

Figure 3-2. Sending Area (Conservation) Characteristics Important to Orange County

<p>1. Open Space/Parks</p>	<p>County Parks, Lands Legacy and Voluntary Ag District parcels, private land trust easement parcels</p>	<p>Protected Open Space & Parks This map displays lands that are either a) privately owned and already protected from development by the County's Lands Legacy program or by private land trust conservation easements, or, b) owned by federal, state, or County government for use as parks, including potential future parks.</p>
<p>2. Water/Water Supply Watersheds (e.g., Eno, University Lake and Cane Creek)</p>	<p>Water Supply Watersheds critical and protected areas</p>	<p>Water Supply Watersheds This map displays the "Critical" and "Protected" Areas of the County's Water Supply Watersheds. Water Supply Watersheds are the land that surrounds and drains into reservoirs, rivers and creeks that are used for public drinking water. Land closest to a public water intake is called the "Critical Area" and is most restricted. Land further away is called the "Protected Area" and is less restricted.</p>
<p>3. Expanded Stream Buffers (beyond 50' nominal for Neuse River) <i>(Note: Covers requested "Aquatic habitat (protection from stormwater events, scouring)" criteria)</i></p>	<p>Define 150' buffer on all perennial stream centerlines</p>	<p>Stream Buffers Requiring that a buffer of undeveloped land be maintained along streams helps maintain water quality in the streams by allowing runoff from nearby development to be absorbed and filtered before it reaches the streams. State regulations currently require a 50-foot stream buffer in the Neuse River basin. This map displays lands in all Orange County river basins that would meet a 150-foot buffer criterion.</p>
<p>4. Wetlands</p>	<p>Hydric soils</p>	<p>Wetlands This map displays hydric soils as the best available indicator of the presence of wetlands. Hydric soils are identified by the USDA's Natural Resources Conservation Service as soils formed under wet conditions. Wetlands perform important water quality and floodwater functions, providing a natural pollutants filtering system as well as soaking up floodwaters during storm and then slowly releasing them afterwards.</p>
<p>5. Prime farmland/prime soils for agricultural production <i>(Note: related to requested "Farmland" criteria)</i></p>	<p>Prime farm soils</p>	<p>Prime Farm Soils This map displays Orange County's prime farm soils. The USDA's Natural Resource Conservation Service evaluates all soil types for agricultural suitability and productivity, including both crops and livestock. Those that are among the best in the nation are called "prime", while those that are among the best in the state are called "state important". The remaining soil types are those least suitable for agricultural production.</p>
<p>6. Farmland <i>(Note: exact data is not available if "Farmed Land" is desired interpretation)</i></p>	<p>Substitute for exact data: Tax parcels => 50 acres and not in Urban Transition Areas or Ex Dev Zones</p>	<p>Large Rural Properties This map displays properties of 50 acres or more that are not in the Urban Transition Areas or Economic Development Zones found on the County's Land Use Plan. A majority of these properties are likely to be actively farmed.</p>
	<p>Rated forest habitat</p>	<p>Prime Forest Habitat</p>

7. Forests, especially mature hardwoods		This map displays prime forest habitat in Orange County, as evaluated by the County's Environment and Resource Conservation Department. The evaluation was based on numerous factors including type and diversity of trees and other vegetation.
8. Habitat corridors, maintaining connectivity	TBD, pending data availability	TBD
9. Natural habitat / Natural Heritage Inventory areas	Natural Heritage Inventory areas	Natural Heritage Inventory Areas This map displays Natural Heritage Inventory Areas within the County. In cooperation with the state, Orange County has previously inventoried areas in the county that represent its most significant natural habitat. These are areas containing rare, endangered, or threatened plant or animal species.
10. Rural buffer areas, especially Hillsborough	Define a buffer around Hillsborough jurisdiction and the Hillsborough Urban Transition Areas proportional in width to the existing Chapel Hill/Carrboro rural buffer area Also include the CH/C rural buffer area	Rural Buffer Areas This map displays the existing rural buffer around Chapel Hill and Carrboro and a potential rural buffer around Hillsborough. Rural buffers can serve as "greenbelts" around towns, limiting development in the buffers, encouraging development within the town limits where public services can more cost-effectively be provided, and creating a clear distinction between "town" and "countryside" in place of sprawl that is neither.

Figure 3-2. (Continued)

<p>11. Historic Properties, including tribal lands <i>(Note: covers requested "Archaeological sites" criteria)</i></p>	<p>Parcels containing historic sites or structures or containing potential archaeological sites including Native American ones</p>	<p>Historic and Archaeological Areas This map displays properties that either a) are in a historic district, are a designated historic site or contain a designated historic building, or b) that are have a high potential for containing archaeological sites (as determined by a previous Orange County study.) The potential archaeological sites include Native American and other sites.</p>
<p>12. Sense of place/community integrity <i>(Note: exact data not available, substitute crossroads communities)</i></p>	<p>Define crossroads communities and use parcels in a ¼-mile radius from the main intersection</p>	<p>Crossroads Communities This map displays crossroads communities. These are small informal communities that are not legally incorporated as towns, but that nevertheless have a distinct identity arising from their long history within the County. They often formed around rural crossroads and are named either for the crossroads themselves or the families that settled there. They are an important part of rural heritage and sense of place.</p>
<p>13. (Scenic) Viewsheds <i>(Note: exact data not available, substitute properties along designated scenic roads)</i></p>	<p>Parcels adjacent to Scenic Roads</p>	<p>Scenic Areas Designated scenic roads and the properties along them are displayed on this map to illustrate the Scenic Areas criteria. A more in-depth analysis taking into account all lands visible from these roads might identify additional properties to be added to this criterion.</p>
<p>14. Preserve environmental carrying capacity of the land <i>(Note: exact data not available, but see #s 1, 2, 3, 4, 5, 7, 8, 9, 10)</i></p>	<p>NA</p>	
<p>15. Air Quality <i>(Note: exact data not available, but see #s 1, 6, 7, 10; also, may be used to develop RA characteristics)</i></p>	<p>NA</p>	
<p>16. Energy Use <i>(Note: use to develop RA characteristics)</i></p>	<p>NA</p>	
<p>17. Traffic/Public Transportation (Receiving Area) <i>(Note: use to develop RA characteristics)</i></p>	<p>NA</p>	
<p>18. Multi-Modal Accessibility, esp. cycling and walking (Receiving Area)</p>	<p>NA</p>	

C. Options Design Map

After production of the Criteria Maps was completed, Task Force members were asked to review the documents and consider the potential coverage options that the maps displayed. Task Force members indicated that for purposes of Economic Modeling the Receiving Area coverages would be most effective for determining feasibility if locations around Rural Activity Nodes from the County's Comprehensive Plan, emerging crossroads communities, and areas in and around Economic Development Zoning Districts and Comprehensive Plan Urban Transition Areas. Task Force members indicated this would be a realistic view of intended growth for the County.

Using the Criteria maps for potential Sending Areas,¹³ the Consultants developed three instructional maps for Sending Area design options.¹³ This map was used by the Task Force to initiate a dialogue concerning the options for what type of coverage Sending Areas may have in the County. Three options were considered:

- Parcel Specific Coverage - A formula would be utilized that calculated the number of Criteria met for each parcel in the County. This formula would then determine the amount of importance given to each parcel for acting as a Sending Area.
- Designated Sub-Area Coverage - Larger regions would be designated Sending Areas based on criteria scores that massed within greater coverages within the County.
- Entire County Coverage - The entire County would act as a potential Sending Area, with any parcel (that was not currently preserved or in a municipality or a Receiving Area) available for participation in the TDR program.

To determine the number of times a criteria, for potential Sending Areas, was found on a given parcel of land, an additional step was taken to develop a scoring model for potential Sending Areas. This process which resulted in the Sending and Receiving Area Scoring Model Maps is described in sub-section III.

III. Sending and Receiving Area Raster Scoring Model

A. Process

The resulting Criteria maps were then provided to the Task Force for further review and discussion. The finalized Criteria Maps were then converted to a raster format for further analysis and processing. The resulting map documents were introduced as Sending and Receiving Area Scoring Model Maps.¹⁴

¹³ Sending Area Options Design Map is located in Appendix F.

¹⁴ Sending and Receiving Area Scoring Model Maps are found in Appendices G and H.

A raster image is comprised of individual pixels (or cells), as in a digital picture, and can be given a numerical value. Each instance of criteria from the previous criteria maps (a preserved parcel or a critical watershed) was given a value of 1 when the pixel, from a rasterized criteria map, fell within the criteria location on the County map.

In order to determine the combined suitability for both Sending and Receiving Areas, for each layer a pixel that fell within the criteria was given a value of 1 and a pixel that was not within a criterion was given a value of 0. The raster model would then “stack” the criteria layers to form a composite, ranking view of suitable land for either Sending or Receiving Areas. For this model, the higher the number score the more suitable or desirable the land would be for a Sending or Receiving area.

No location met all criteria. The Receiving Area scoring produced a highest possible score of 7 criteria met out of a possible 9, while Sending Area scoring produced a highest 10 out of 12 criteria met. Legends for both maps show a range from 0, for land where none of the criteria were met, to the higher number for either map, for the highest number of criteria met. The number of criteria met corresponds with the number displayed in the legend. White spaces in both maps represent areas that are already preserved and are not considered for either Sending or Receiving Areas.

The end products of this process are two maps displaying a ranking of land throughout the County best suited for potential Sending or Receiving Areas according to the “score” achieved. *(Refer to Appendix G. and H. for the finalized Scoring Model Maps)*

Criteria for Sending Areas represent identified values for preservation, while Receiving Area criteria represents characteristics support increased development. Legends for both maps show a range from 0, representing land where none of the criteria were met, to the higher number for either map, representing the highest number of criteria met. The number of criteria met corresponds with the number displayed in the legend. The results from these scoring model maps were used to help define three versions of TDR Sending and Receiving Areas that will be used to test the economic feasibility of TDR in Orange County.

Staff and the Consultants then developed alternate scenario maps for use in the Economic Model. The resulting Scenarios reflect the input of Staff recommendations, Task Force recommendations, Criteria mapping, and Scoring Model mapping. Consultants then developed the Scenarios for further consideration as potential choices that could be made in determining the feasibility of the TDR program. Sub-section 4 provides information on the resulting Scenarios.

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IV. Hypothetical Sending and Receiving Area Scenarios

To test the economic feasibility of TDR in Orange County, three hypothetical scenarios for Sending Areas were tested in an economic model that assesses the supply and market value of Sending Area transferable credits as compared with a hypothetical Receiving Area scenario's demand for transferable credits.¹⁵

Hypothetical Receiving Areas

Map Document in Appendix I.

Based on the results of the Receiving Areas Scoring Model, nine separate areas within the County's jurisdiction were identified as hypothetical Receiving Areas for use in the Economic Modeling Scenarios. Five of the hypothetical Receiving Areas are around Rural Activity Nodes in the County's Comprehensive Plan or emerging crossroads communities. The remaining three, constituting the largest Receiving Areas, correspond to areas in and around Economic Development Zoning Districts and Comprehensive Plan Urban Transition Areas.

Hypothetical Sending Areas Scenario 1: Maximum Coverage

Map Document in Appendix J.

This Sending Area Scenario was created to measure the economic effect of having a very large amount of land designated as Sending Area. In this Scenario, the Sending Areas include all land in the County's jurisdiction (not in the municipal jurisdictions) that is NOT in one of the nine hypothetical Receiving Areas.

This Scenario would permit the largest number of property owners in the County to have the option of participating in the TDR program. It would not address the differences in land values between properties closer to the region's major towns and those farther away, and in a TDR program in which all Sending Area properties receive the same number of transferable credits per acre, it would tend to encourage protection of properties farther away from the towns rather than those that are closer.

Hypothetical Sending Areas Scenario 2: Growth Pressure Emphasis

Map Document in Appendix J.

This Sending Area Scenario was created to measure the economic effect of having a Sending Area made up of a smaller amount of land than Scenario 1, in a fairly contiguous area of the County that is experiencing or likely to soon experience growth pressures. Growth pressures are typically felt most strongly in areas closest to the existing major towns and interstate highways. In this Scenario, the Sending Areas include land that is in the County's jurisdiction near the major towns and interstates, excluding land in the Receiving Areas.

This Scenario would limit participation in the TDR program Sending Area to those property owners whose land is likely experiencing more growth pressure, providing an opportunity to protect those lands more readily than those that are not experiencing

Sending and Receiving Area Scenario Maps are located in Appendices I and J.
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that pressure. It may provide a narrower range of land values among Sending Area properties than Sending Area Scenario 1, avoiding the issues that can arise when there are large differences.

Hypothetical Sending Areas Scenario 3: Natural Resources Emphasis

Map Document in Appendix J.

This Sending Area Scenario was created to measure the economic effect of having a Sending Area made up of a smaller amount of land than Sending Area Scenario 1, in scattered areas throughout the County that include high concentrations of the most valued natural resources. In this Scenario, the Sending Areas include land in the County's jurisdiction with high scores in the Sending Area Scoring Model (which has multiple natural resource-based criteria), excluding land in the Receiving Areas.

This Scenario would limit participation in the TDR program Sending Area to those property owners whose land is in or near areas that contain much of the County's most valued natural resources. This could provide opportunities to protect those lands more readily than lands that contain fewer of those resources. Like Sending Area Scenario 1, it may provide a wide range of land values among Sending Area properties that could tend to encourage protection of properties farther away from the major towns rather than those that are closer.

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PROGRAM EVALUATIONS

This section examines the potential impacts of a TDR program on seven other existing programs in Orange County:

- Lands Legacy Program;
- Comprehensive Plan Land Use Element;
- Economic Development;
- Farmland Preservation / Voluntary Agricultural District Program;
- Joint Planning Agreement with Chapel Hill and Carrboro;
- Efland-Mebane Small Area Plan Task Force; and
- Hillsborough Urban Transition Area Task Force.

For each of the seven existing programs, this section of the Feasibility Study gives a description of the program, followed by a list of ways a TDR program could benefit or complement the existing program; a list of ways it could compete with or detract from the existing program; and a brief summary.

To evaluate TDR's potential impacts on these programs, information was gathered on the existing programs' goals and objectives, specific features, and recent issues or findings. The information came from Orange County maps, reports, studies or adopted plan documents and from interviews with key staff members at relevant agencies or organizations. (See the Appendices for a list of interviews conducted.) Each program was then examined in light of various options for the design and administration of a potential TDR program to identify complementarities or conflicts.

I. Lands Legacy Program

Description- During April of 2000, Orange County identified the need for preservation of existing open space, cultural resources, and farm land through the establishment of the Lands Legacy Program. By utilizing both private and public funding the Program has protected over 1700 acres of land using purchase of development rights (PDR) and conservation easement methods. The Program has identified five main goals for land acquisition: identified natural areas and wildlife habitats, as well as, prime forest areas, prime or threatened farmlands, lands of cultural, scenic or archeological significance, future parklands, and watershed riparian buffer lands.

TDR could benefit or complement the Lands Legacy program in these ways:

- Provide additional buyers of development rights for those landowners who want to sell but have to wait due to limited funds available to Lands Legacy program.
- Provide an additional revenue source to fund the Lands Legacy program, IF the County acts as a "seller" of TDR credits.

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- TDR could be designed and positioned as a voluntary conservation program offered to landowners in keeping with the spirit of Lands Legacy while allowing private developers to fund the purchase of development rights instead of the County.
- TDR could be designed and positioned as an integral part of an expanded Lands Legacy program in which private developers help fund the purchase of development rights in exchange for density bonuses in Receiving Areas.
- TDR Conservation Easement Agreements could be designed to be the same as or similar to those used in the Lands Legacy program, allowing one or two future home sites, etc., and thus being familiar to those who are familiar with Lands Legacy.
- TDR could be designed such that Sending Area property owners would receive similar dollar amounts for their development rights regardless of whether they sold them through the Lands Legacy program or to a private TDR buyer.

TDR could compete with or detract from the Lands Legacy program in these ways:

- TDR could attract Sending Area property owners that the Lands Legacy program would have funded, IF TDR credits end up selling at a higher price than the County's valuation of the development rights in the Sending Area properties; depending on the design of the TDR program, this could affect property owners in different parts of the County differently.
- Sending Area property owners may confuse the two programs, such that any negative reports they hear about the TDR program may tarnish the reputation of the Lands Legacy program. For example,
 - o TDR could be designed or positioned (or more likely, gain an unearned reputation) as a mandatory or pseudo-mandatory program, damaging the trust that landowners have in the Lands Legacy program, or at least causing some to be more hesitant to come forward and inquire about Lands Legacy;
 - o Early Sending Area participants in the TDR program may not make the best-informed decisions about the price their TDR credits should command, and may as a result harbor resentment towards the County that would affect their opinion of the Lands Legacy program, too, however unjustifiably;
 - o Some Sending Area property owners may conclude that the County isn't funding the Lands Legacy program anymore if they hear reports of lack of buyers for TDR credits.

- Some Sending Area property owners may be turned off from participating in either program; IF TDR is designed and perceived as complex and hard to determine whether it's really a winning proposition for Sending Area property owners, and/or hard to determine whether TDR or Lands Legacy is the "better deal" for them.
- Sending Area property owners may conclude both programs are just the County providing lip-service to preserving working lands, if they can neither get their development rights approved for purchase through Lands Legacy nor find a private buyer for their TDR credits.

Many of the potential benefits to and detractions from the Lands Legacy program would also apply to other land conservation organizations that protect natural resource lands with conservation easements in Orange County. The most active are Triangle Land Conservancy, Eno River Association, and the Orange Water & Sewer Authority.

II. Comprehensive Plan Land Use Element

Description-The Orange County Comprehensive Plan details the long-term goals for growth, preservation and development throughout the County. A major portion of the Comprehensive Plan is the Land Use Element, which will direct the County's pending growth and land use patterns. The Land Use Element provides a blueprint for growth that enhances and protects the economic, environmental, and human resources found within Orange County. The Future Land Use map as adopted by the County, details land use categories, such as, urban transition areas, rural buffers, economic development districts, urban areas and agricultural-residential uses.

TDR could benefit or complement the Comprehensive Plan Land Use Element in these ways:

- The land use plan may ultimately guide the designation of Sending or Receiving Areas by establishing constraints or opportunities for future development in areas of the county. For example, the Comprehensive Plan's designated Urbanizing Transitional Areas, Economic Development Districts, and Activity Nodes may be identified as TDR Receiving Areas, while the Comprehensive Plan's Agricultural Residential, Rural Buffer, and Rural Residential areas may be identified as TDR Sending Areas.
- TDR can be designed to provide an additional tool for achieving the County's goals for Natural Environmental Resources Conservation, Growth, Housing and Community Facilities and Services (as outlined in the Comprehensive Plan, chapter 3.5.)
- Provide additional support for mitigating or preventing the unintended consequences that arise from unmanaged growth patterns. Throughout

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the Comprehensive Plan a consistent and manageable growth strategy is identified as a primary focus.

□ Allow private market transactions between Sending Area property sellers and Receiving Area purchasers to alleviate pressures for Orange County to fund all preservation of green space. While not in competition with the existing Purchase of Development Rights program (PDR), the TDR program will allow for additional options in attaining the directive for open space preservation as identified in the Comprehensive Plan.

TDR could compete with or detract from the Comprehensive Plan Land Use

Element in these ways:

□ TDR could identify potential Sending or Receiving Areas that are in conflict with the Comprehensive Plan's designations for future land use.

□ TDR has been difficult to implement in isolated cases as determined by case study analysis. If support for TDR is not achieved there could be a negative perception in regard to the Comprehensive Plan's preservation and growth management goals by residents that attempted to participate in the TDR program.

□ To implement the TDR program, additional staffing may be required within various agencies to provide oversight of the process. If such staffing is not obtainable for agencies that work to implement the Comprehensive Plan Land Use Element, the TDR program may compete with attention for other initiatives as designated by the plan.

□ The TDR program would require additional consideration in respect to the Economic Development initiatives as designated by the Comprehensive Plan Land Use Element in order to reduce or eliminate conflict with existing market development for the county.

III. Economic Development

Description- Economic Development in Orange County is focused on making the County, "a great place to live and work" by fostering public/private relationships in order to build employment for county residents and increasing the non-residential tax base. The over-all goal as maintained by the Economic Development Commission is to create 5,000 new private sector jobs and increase \$125,000,000 in new commercial property by the year 2010.

TDR could benefit or complement Economic Development in Orange County in these ways:

□ Providing an incentive for developers that counters the perception, mentioned by several economic development interviewees, that

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commercial growth in the county is discouraged through tax rates, slow governmental process, water and sewer access and lack of economic incentives.

□ Increasing the tax base by increasing economic development in the County and thus help achieve the EDC's goal of adding 5,000 new jobs. Increasing tax rates are a problem for residents in Orange County, especially since much of the land is owned by government or universities, which are exempt. The EDC's goal is currently not seen as realistic especially since the county has lost jobs in recent months.

□ Urban Transition Areas, Economic Development Districts, Rural Nodes and designated growth areas were all identified by interviewees as prime potential Receiving Areas. By using these areas as Receiving Areas, TDR could encourage economic development, especially in the ED districts.

□ Water and sewer service in Orange County is generally delineated as the urban services area and has not been extended into the Economic Development Districts. Several interviewees mentioned that water and sewer capacity limited economic development. If TDR could be used as a way to encourage water and sewer extension, TDR could be a pro.

□ OWASA is accepting of the TDR program as long as the benefiting parties paid for any extension of water and sewer facilities within OWASA's service area, and as long as the protective zoning and utility policies for the Cane Creek and University Lake watersheds remained intact.

□ An OWASA representative thought that a TDR program would be accepted by the general public if it could be made understandable; and that it would be acceptable to elected officials, as long as it was used to reinforce, rather than change, existing land use, growth, and planning policies.

TDR could compete with or detract from Economic Development in Orange County in these ways:

□ There are different attitudes on growth and development between the northern and southern portions of the county: the north generally would like more development, including mixed use, while the south has a more conservative stance on residential and commercial growth. Some areas may not be receptive to the idea of TDR.

□ Some Orange County residents have a resistance to change which has slowed the development of the Economic Development Districts as well as the progress in reaching goals of the "Shaping Orange County's Future" Report. How TDR is explained and administered may determine how well it is accepted and applied. TDR could be yet another example of a program that stalls.

□ Over-stringent regulations have tended to reduce economic development in the county according to a few interviewees. If TDR increases regulations on development, TDR could be a con.

□ Several experts indicated that Chapel Hill may not be interested in joining in the TDR program due to a resistance to more development.

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□ There is only a finite supply of water available to meet the projected needs of OWASA's service area. Water demands are expected to double within the next 50 years. If TDR puts additional demands on the water supply, TDR could be a con.

□ Housing costs are rising in Orange County causing many lower and middle income families to move to surrounding counties. The average single family home costs \$365,000. While private developers have contended that impact fees have an impact on housing prices, it is not proven or a commonly accepted fact that TDR credit costs will be passed along to the homebuyer. Unlike the case with impact fees, more product (and thus more revenue) will be created by the transaction (<http://www.co.dane.wi.us/plandev/planning/tdr/section4.htm>). TDR could be either a positive or negative influence on housing prices, depending on which of two competing theories prevails regarding the effect of TDR on the price of housing.

1. The price of the home built with TDR credits will increase because developers will pass the additional cost of purchasing development rights to home buyers.

2. The sale price of an unimproved parcel which requires TDRs to develop at a higher density will be discounted compared to a similar parcel which does not require TDRs to develop at that same density. Hence, no increase in the price of housing will occur since the costs of TDR credit purchases will be absorbed in the additional revenue gained by applying the TDR credits in the Receiving Area(s).

Generally, the addition of more housing units (increasing supply) would have a reducing effect on housing prices. In reality, the relatively small number of additional houses will not have a noticeable effect on the general pricing of housing.

IV. Farmland Preservation/Voluntary Ag Districts

Description- In 1985, North Carolina passed the Farmland Preservation Enabling Act, which provided authority to counties in order to establish farmland preservation programs, including agricultural districts. In 1992, Orange County adopted a Voluntary Farmland Preservation Program Ordinance, which created the Agricultural Preservation Board (APB) and procedures for establishing Voluntary Agricultural Districts (VAD). Participation in the Voluntary Ag Program includes: increased protection from nuisance suits, waiver of water and sewer assessments, requirement for public hearings prior to proposed condemnations, priority consideration in development review, and eligibility for preservation funds.

TDR could benefit or complement the Farmland Preservation / VAD program in these ways:

□ TDR could provide a mechanism for allowing existing VAD property owners to turn their revocable conservation agreements into permanent conservation

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easements and obtain cash for their development rights while retaining their VAD-based protection from water/sewer assessments, condemnations and nuisance lawsuits, if the property is also designated as a TDR Sending Area.

TDR may create an additional incentive for participation by Sending Area property owners in each program based on the prospect of both obtaining cash for development rights and obtaining protection from water/sewer assessments, condemnations and nuisance lawsuits by participating in both VAD and TDR.

TDR can be designed and positioned as an additional option for Sending Area property owners who also qualify for VAD, giving them the flexibility to decide whether to start by participating in VAD with a revocable conservation agreement and then participate in TDR at some later time, or vice versa, or just one or the other, or neither.

o Note: For Sending Area property owners who choose to participate in TDR without first participating in VAD (or whose property doesn't qualify for VAD at first, but does at a later point in time), the VAD program could be clarified or amended as needed to ensure that permanent conservation easements under TDR would meet the VAD's "qualifying farm" requirement of a revocable conservation agreement of at least 10 years' term.

At a recent meeting of the Agricultural Preservation Board, the board expressed interest in supporting the TDR proposal as long as a TDR program would result in the protection of farmland in Orange County. There was interest in requiring that sending area farms remain in active farm use. The TDR program could consider some farm income production requirement, similar to what is required for farms enrolled in the Present Use Value Taxation program.

TDR could compete with or detract from the Farmland Preservation / VAD program in these ways:

TDR could cause an increase in the re-conveyance of development rights permitted at the 20-year point under the VAD program, IF the TDR Receiving Areas definition or designation included property already within an Ag District (a very unlikely scenario easily avoided through careful design.)

TDR could cause a drop in rates at which property owners are joining the VAD program IF they cannot do both and if they tend to prefer to participate in TDR to obtain cash for their development rights rather than participating in VAD to obtain protection from water/sewer assessment, condemnations, and nuisance lawsuits.

Sending Area property owners may confuse the two programs, with possible negative consequences for the VAD program, particularly if there is not a well-planned and well-executed public awareness process. For example,

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- o Some Sending Area property owners may conclude that the County isn't operating the VAD program anymore if the TDR program isn't clearly positioned as an option in addition to the VAD program rather than in place of it;
 - o Some property owners may conclude that the VAD program has been redesigned to no longer include protection from condemnations, water-sewer assessments, and nuisance lawsuits, IF the TDR program doesn't have those benefits for Sending Area properties;
 - o Some property owners may conclude that the VAD program has been converted from a term-limited, revocable conservation easement program to a perpetual non-revocable one, IF TDR is designed to be non-revocable.
 - o TDR could be designed or positioned (or more likely, gain an unearned reputation) as a mandatory or pseudo-mandatory program, damaging the trust that landowners have in the VAD program, or at least causing some to be more hesitant to come forward and inquire about VAD;
 - o Early Sending Area participants in the TDR program may not make the best-informed decisions about the price their TDR credits should command, and may as a result harbor resentment towards the County that would affect their opinion of the VAD program, too, however unjustifiably;
- Some current VAD participants may harbor resentment towards the County for limiting their options or unfairly enhancing other property owners' options, IF the TDR program is not designed to accommodate the conversion of VAD revocable conservation agreements into permanent TDR conservation easements and saleable/transferable TDR credits.

V. Joint Planning Agreement & Land Use Plan

Description - In November 1987, Chapel Hill, Carrboro, and Orange County entered into the Joint Planning Agreement. The Agreement provides for planning guidelines to better coordinate the growth characteristics of Chapel Hill, Carrboro, and Orange County. The Joint Planning Agreement Land Use Plan (JPALUP) indicates locations within the County where agreement of expectations are required. The JPALUP identifies locations, such as, development transition areas, Carrboro/Chapel Hill planning boundary, and joint courtesy review areas.

TDR could benefit or complement the Joint Planning Agreement & Land Use Plan (JPALUP) in these ways:

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- The initiatives set forth in the JPALUP work towards establishing cooperation between the municipalities of Chapel Hill and Carrboro and Orange County. Case studies have shown that one of the difficulties in establishing a TDR program is defining agreed upon approaches that take into account the interests of both municipalities and counties. The JPALUP can act as a guide in this process should municipalities opt to participate in the TDR program.
- The JPALUP defines Rural Buffer areas set aside for low density residential growth and to maintain the natural environment that could function as potential Sending Areas. (For a more comprehensive definition of the Rural Buffer, see Section V. of the JPALUP.)
- The JPALUP establishes Transition Areas that could function as potential Receiving Areas. Transition Areas provide for higher density development and take into account the changing nature of locations adjacent to the urbanized portions of Chapel Hill and Carrboro.

TDR could compete with or detract from the Joint Planning Agreement & Land Use Plan (JPALUP) in these ways:

- Permit Administration, as defined in the JPALUP's Section 2.4, identifies the requirement for a review of any application for development permits within the Rural Buffer area, submitted to Orange County (OC). To comply, OC will need to structure the TDR process in a manner that allows timely review of all materials for all parties in order to comply with the JPALUP. Time and staffing will be a concern for municipalities in order to comply with the 45 day window allowed for review. In the Rural Buffer area, this will apply to the potential of Receiving Areas.
- The Rural Buffer area around the Chapel Hill - Carrboro jurisdictions covers a portion of Orange County. Conforming the TDR program to disallow Receiving Areas within the Rural Buffer may unduly limit the potential for Receiving Areas within the County and hamper the TDR program's success; however, designing a TDR program with Receiving Areas in the Rural Buffer area would require amending the JPALUP.

VI. Efland-Mebane Small Area Task Force Program: Evaluation of TDR Implications

Description - The Efland-Mebane Small Area Task Force was appointed by the Orange County Board of County Commissioners in 2004 to work with the Orange County Planning Department to develop a Corridor Study for the Efland Mebane area. This study was also designed to update the Efland portion of the Comprehensive Plan Land Use Element (completed in 1981) and the Efland Area Study (adopted in 1991).

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Current Issues - The Efland community, which is part of unincorporated Orange County, has an estimated population of 2000. The City of Mebane (across Alamance County border from Efland) has an estimated population of 7800 and is growing rapidly, mostly due to affordable housing. The small portion of Mebane's city limits which cross into Orange County is growing most rapidly, because schools in Orange County are rated higher than schools in Alamance County. Only a small portion of Efland currently receives sewer service, but there are plans for expanded services as it continues to grow. Mebane provides water and sewer services to its residents and to some Orange County residents in the Efland area. However, most of the Efland area is part of Orange County's primary service area, as defined by the Water and Sewer Service Management and Planning Boundary Agreement of 2001.

Efland-Mebane Small Area Plan – Following a series of Task Force meetings in 2005-2006, the BOCC adopted the Efland-Mebane Small Area Plan on June 6, 2006, and implementation work is under way. The major issues addressed by the Plan are as follows:

- Water and Sewer
- Land Use/Community Character/Design
- Transportation
- Housing
- Parks, Recreation and Open Space
-
- Communications and
- Intergovernmental Issues and Other Recommendations.

Water and sewer; land use; and transportation got the most attention by the Task Force. Members discussed the broad planning of services, annexation, and land uses, but also made specific recommendations for the location of development and service extensions. Policies were also suggested for the improvement of local infrastructure (i.e. water/sewer piping, roads, communications technologies) and the funding of public services.

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There are several issues in the Plan of specific relevance to a TDR program. The Task Force had interest in the phasing-in of infrastructure and targeting future growth along prominent highway corridors and in the economic development districts. These ideas could be promoted by a TDR program that identified specific Receiving Areas. The Task Force was also interested in requiring certain development standards (i.e. adequate pipe sizing, cluster development, mixed use, sidewalks). In some cases, TDR programs require development standards for the use of credits to increase densities in Receiving Areas. There was also some interest in allowing for more intense development on large parcels, as well as the combination and/or redevelopment of parcels for more comprehensive development plans. A TDR program could be structured to allow for stepped-up densities per the size of a Receiving Area parcel, and could permit the use of

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development credits on joined properties. A specific recommendation was made by the Task Force that a TDR program allows for the conversion of residential development credits to commercial uses in Receiving Areas, to promote commercial growth in the Efland area. Properties that contribute to the connectivity of public open space in the County. *ould benefit or complement the Efland-Mebane Small Area Plan in these ways* he eas (i.e. easements are not, if TDR credits can be converted to commercial *mpete with or detract from the Efland-Mebane Small Area Plan in the* used program or standards or impact fees, if such -based program or additional incentives are not provided for these areas **II. Hillsborough Urban Transition Area Task Force Program**

The Task Force also identified some goals for more rural areas to be developed at low densities and greenways in the area to be connected. TDR could be designed to limit maximum densities in Sending Areas, and provide additional TDR credits as bonuses for
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TDR could

ys: Encourage increased development in designated Receiving Areas compatible with the Efland-Mebane Small Area Plan, such as t

Economic Development districts and urban transition areas Encourage preservation or low density development in desired ar

watersheds, rural areas), if specific Sending Areas are designated Promote the application of specified development standards (i.e. pipe sizing, annexation, cluster development, mixed use, parking, design guidelines, signage, streetscape, sidewalks), if additional require

mandated through the application of TDRs in a Receiving Area Provide a way for residential development to shift toward more commercial developme

uses in Receiving Areas *TDR could co*

seways: Discourage the phasing of water/sewer services (by permitting non-sequential or non-contiguous growth) if criteria-b

additional incentives are not provided for these areas Provide an “out” for site development stan

exemptions are allowed in Receiving Areas Discourage the protection or development of specific areas, such as those targeted for parks/trails or highway frontage, if criteria

V

Description- The Orange County Board of County Commissioners and the Hillsborough Town Board formed the Hillsborough Urban Transition Area Task Force in 2004 to identify areas within Hillsborough’s ETJ and the surrounding area that can be served with water and sewer and where there is anticipated

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increased demand for other public services (schools, parks, transportation, etc). The Task Force evaluated several existing documents and plans to make their recommendations, including the existing Land Use Element of the Comprehensive Plan, the Water and Sewer Management Planning and Boundary Agreement, as well as several capacity and planning analyses conducted for the area. The Task Force met four times in the fall of 2004; their final meeting resulted in 13 *Defacto Principles of Agreement* and a final report recommending development of a *Joint Strategic Growth Plan*. No approval of the Task Force's findings is required of the municipality or the County. However, the work is being used to update the Land Use Element of the Comprehensive Plan. Future growth and influence the results of other planning initiatives in the county. Work was described for developing the recommended Joint Strategic Growth Plan. The following are of most relevance to a TDR program describe the following objectives: the Water and Sewer resources standards for subdivisions Limitation of urban sprawl

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Current Issues - The Hillsborough area is experiencing tremendous pressure to grow its physical borders and capacity to provide public services to accommodate current and future residents. This quaint, historic town is attractive to new comers both for its amenities and heritage, but also for its proximity to the Research Triangle. Residential growth is preferably going to be balanced with economic development and rural preservation. However, very little growth can be sustained if public services, particularly water and sewer, can't be expanded. The Hillsborough Urban Transition Area Task Force studied these issues to produce goals for f

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Urban Transition Area Defacto Principles of Agreement- The *Defacto Principles of Agreement* are objectives set forth by the Task Force for making future growth decisions in the Hillsborough ETJ and surrounding area. The *Principles of Agreement* (POA) discussed the creation of a joint plan for the area, extent of the Town's Urban Service Area, resource protection, development standards, preventing urban sprawl, and the integration of planning goals. An implementation strategy was provided for each POA, and a scope of wo

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Those *Principles of Agreement* wh

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- Defining the Urban Service Area in accordance with Management Planning and Boundary Agreement
- Protecting Upper Eno/Neuse River watersheds and groundwa
- Providing consistent developmen
- Coordinated planning for parks
- Protection of cultural resou

In many cases, it was determined that more analysis was needed in order to prescribe a more specific objective. However, it was decided that Hillsborough does not have the water capacity to expand growth beyond what has already been committed, and therefore the Urban Service Area is too large and needs

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to be pulled back in areas. The presence of major thoroughfare access to the south suggests that growth be encouraged there and discouraged to the north of the Town. *complement the Hillsborough Urban Transition Area Task Force* Urban design additional incentives for the preservation of cultural or historic *tract from the Hillsborough Urban Transition Area Task Force* Sending Areas could be implemented if the program is adopted without additional incentives to help prevent "leap-frogging."

o

TDR could benefit or

benefit in these ways: Promote limited growth in the outer reaches of the Hillsborough Service Area (where future water and sewer service is anticipated)

- Prevent unsustainable development in critical/protected watersheds
- Promote "urban style" development standards in Receiving Areas Provide additional resources

Discourage development in the Rural Buffer to the south *TDR could compete with or displace*

development in these ways: If the TDR program is designed in isolation from the proposed Joint Strategic Growth Plan, designated Sending and Receiving

Areas could conflict with the ultimate direction articulated in that Plan. Strain the already limited public water supply by designating too much of

the Urban Transition Area as a Receiving Area to realistically be serviced. Discourage the phasing of water/sewer services (by permitting non-sequential or non-contiguous growth) if a criteria-based TDR program

ECONOMIC FEASIBILITY MODEL

I. Overview

The balance of supply and demand in a TDR program is a critical step in structuring a successful program. The supply and demand is a direct result of the key elements of the program: Sending and Receiving Area locations and sizes, density bonuses, TDR allocation rates, and other factors. An analysis was performed of the supply and demand from the three Sending Area Scenarios and one Receiving Area Scenario developed by the TDR Task Force (Figure 5-1; results are shown in Figure 5-2). The results can vary significantly depending on the TDR allocation rates, density bonus, and expected participation rate used. For the analysis, a spreadsheet model was designed to facilitate different “what if” scenarios reflecting the different values for the key variables. These assumptions can be altered to develop three or more alternatives that demonstrate different objectives or assumptions. This process will generate feedback and assist in selecting the preferred alternative. The assumptions are defined later in this section.

Figure 5-1. Receiving (1) and Sending Area (3) Scenarios (full page maps located in Appendices I and J)

RECEIVING AREA SENDING AREA 1 SENDING AREA 2 SENDING AREA 3

II. Methodology

The amount of eligible sending area credits in the three different scenarios was calculated using parcel-level tax data, zoning designations, and maps of the sending areas. Utilizing GIS, these three different data layers were combined to form a descriptive database of the properties within the sending areas. The properties with development potential were then selected. These properties are

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either vacant or consist of one structure located on a parcel that is large enough to be subdivided into additional lots (e.g., one house on a 100-acre property). Once these properties were selected, a TDR allocation rate of one TDR credit per acre was applied to estimate the total TDR supply.

The expected TDR demand was calculated in the spreadsheet model in multiple steps. Using the GIS parcel database, the properties in the receiving area with developable area were selected. These properties were either vacant or had one structure with additional land that could be subdivided. The next step was to categorize these properties by zoning district and calculate the maximum allowable density as of right. This was then multiplied by the TDR density bonus to derive the maximum density with TDR. In order to show just the credits associated with the TDR bonus, the as of right credits were then subtracted to derive the maximum allowable TDR credits.

In order to calculate the expected number of credits that may be used by developers on sites in the receiving area, the maximum density was multiplied by the expected increment per acre (e.g., 80 percent of maximum density). The result is the overall expected TDR demand for the subject receiving area. The definitions for each of the terms and the assumptions used in this model are described below.

- TDR allocation rate – The number of TDRs that a sending site owner can sell per acre. The summary reflects an allocation rate of one TDR credit per acre. For a vacant 10-acre property, the property owner could sell 10 TDR credits.
- Sending Area participation rate – For purposes of this study, it is assumed that 100 percent of eligible landowners will wish to participate, although for illustrative purposes sending area credits at 80% and 50% participation rates are also shown.
- Density bonus – The percent increase of allowable units in the receiving area. The summary reflects a five-fold increase in existing zoning in the receiving area. Since the majority of the receiving area is zoned for low density, this large percentage increase still does not produce high densities in most areas. For example, an AR district currently allows one dwelling unit per acre and would be eligible for up to four additional units. This study uses a conversion rate of one TDR credit equals one unit of additional density.
- Expected average increment per acre – The amount of allowable units expected to be used in the receiving area. Based on comparable studies, this analysis assumes the developer will use an average of 80 percent of the maximum theoretical increment per acre.
- Receiving Area participation rate – For purposes of this study, we assume 100 percent of eligible Receiving Area landowners will wish to participate.

- i Eligible sending acres are based on vacant land and zoning and do not represent demand for TDR credits.
- ii Participation rates reveal the number of acres involved in the program with the varying degrees of participation.
- iii Eligible receiving acres were calculated using the GIS parcel database. The properties in the receiving area with developable area were selected. These properties were either vacant or had one structure with additional land that could be subdivided.
- iv Maximum allowed TDR credits were calculated by first categorizing the eligible properties by zoning district and calculating the maximum allowable density as of right. The as of right density was then multiplied by the TDR density bonus to determine the maximum allowable density with TDR. In order to show just the credits associated with the TDR bonus, the as of right credits were then subtracted to derive the maximum allowable TDR credits.
- v In order to calculate the expected number of credits that may be used by developers on sites in the receiving area, the maximum density was multiplied by the expected increment per acre (e.g., 80 percent of maximum density).

III. Analysis of Supply and Demand

The feasibility analysis reveals that, with the above assumptions, supply will exceed the number of Receiving Area TDR Credits in every case. The sending areas produce more TDR credits than the receiving areas can accommodate. This may provide a comfortable “cushion” of demand but may be problematic as well since research indicates that the receiving area should be large enough to accept sufficient TDR credits to make an attractive market (Pruetz, 2003). This imbalance in supply and demand can be addressed through increasing the density bonus rate; adjusting the TDR allocation rate; modifying the language in the conservation easements placed on Sending Areas to be more restrictive of allowable uses; a reduction in the participation rate of the sending areas; enlarging the size of the receiving areas; reduced demand through applying design standards or affordable housing requirements; and/or through the conversion of sending area credits to credits for increasing commercial development within Economic Development Zones, rural development nodes, or other compatible areas of Orange County.

Another program option that would help address the imbalance is allowing certain types of development, such as Planned Unit Developments (PUD), to be eligible for using more TDR credits. PUDs would act as an alternative option for

Figure 5-2: Summary of Potential TDR Credit Calculations

Eligible Sending Acres ⁱ	180,500	82,900	74,700
Total TDR Supply (100% Participation) ⁱⁱ	180,500	82,900	74,700
Total TDR Supply (80% Participation)	144,400	66,300	59,800
Total TDR Supply (50% Participation)	90,200	41,400	37,400
Eligible Receiving Acres (less built-upon land) ⁱⁱⁱ	7,500	7,500	7,500
Maximum Allowed TDR Credits ^{iv}	31,700	31,700	31,700
80% Adjustment for Developer Utilization ^v	25,400	25,400	25,400
Potential TDR Credits	25,400	25,400	25,400
Net Supply-Demand (100% Participation)	155,100	57,500	49,400
Net Supply-Demand (80% Participation)	119,000	41,000	34,400
Net Supply-Demand (50% Participation)	64,900	16,100	12,000

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developers and may accommodate more than the density bonus. In order to obtain the additional credits, the developer would have to meet specific requirements set forth in the TDR provisions. These requirements could include: certain design criteria, multi-family housing units, mixed-use development, affordable housing, public infrastructure investments, etc. This option would require additional review and approval above and beyond the normal process carried out by the Planning Board, County Commission or a TDR Committee. Under the current scenarios, this program option would enable the receiving areas to accommodate more credits and provide a better balance of supply and demand.

IV. Analysis of TDR Pricing

Since the value of land in Orange County varies dramatically, the price of TDR credits will also vary, all other things being equal. Based on case studies and conversations with Analytical Consultants, a firm with expertise in appraising the value of conservation easements with a thorough knowledge of the market in Orange County, conservation easements are valued based on the “percentage of fee value” or percentage of the total value of the land. (Snow and DeRosia, 2006) For the type of conservation easements that would be used in a TDR program in Orange County, the value usually varies between 50 percent and 80 percent depending on the property’s proximity to urban areas such as Chapel Hill, Hillsborough, Mebane, and parts of Durham. When asked about the “percentage of fee value”, Analytical Consultants stated:

Fifty percent is good for rural areas, but we’ve seen 70%+ for areas closer in to Chapel Hill. During my discussions a few weeks ago with the various land conservancy groups in the area, the Triangle Land Conservancy reported paying more than 85% for areas close to Raleigh, so I think we have to assume that the percentage value will continue to increase. – Analytical Consultants, May, 2006

Based on Analytical Consultants input, a standard of 50 percent of total land value was used for areas with little urban influence and 70 percent of total land value for areas with urban influence.¹⁶ Using these standards an analysis was conducted on the value of conservation easements or TDR credits throughout the County. The analysis applied the two different “percentage of fee value” standards to the median value of vacant land in each Township. As shown in Figure 5-3 (which includes municipalities), the value of conservation easements or TDR credits varies significantly in Orange County. Even within Township, the variation in land values is significant.

The use of TDR will result in a conservation easement on the sending property. The value of the TDR credit is directly linked to the value of the conservation easement. In Orange County, the values of conservation easement vary between 50 to 70 percent of the total land value depending on the property's proximity to urban areas such as Chapel Hill, Hillsborough, Mebane and parts of Durham.

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Figure 5-3: Median Value of Conservation Easement (per acre)ⁱ

Little River	\$3,816	\$5,342
Cedar Grove	\$3,962	\$5,547
Cheeks	\$5,771	\$8,079
Hillsborough \$2	7,226	\$38,116
Eno	\$9,466	\$13,253
Bingham \$	5,129	\$7,181
Chapel Hill	\$56,013	\$78,418
All County Values	\$10,636	\$14,891

ⁱ The median values of conservation easements (per acre) were calculated using the GIS parcel database. The first step was to compile all vacant parcels in each Township. The median assessed values of these properties were calculated per acre per Township. Using these values, the corresponding percentages of total land value were applied to derive the median value of conservation easements.

Given the assumption of one TDR credit allocated per Sending Area acre, these figures translate directly into the value of a TDR credit to the Sending Area landowners. The purpose of this information is to demonstrate how the values of TDR vary broadly across the seven Townships in Orange County; furthermore, an analysis of property values within each Township also indicates a broad variability as well. All of this implies that achieving equity in TDR transactions may be a concern and must be addressed either through a well-educated open market process or supplemented by appraisals. Figure 5-4 provides a simple tabulation of all the acreage in the Receiving Areas, including already built-upon lands.

Cedar Grove Little River Cheeks Hillsborough Eno River Bingham Chapel Hill **Townships**
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Figure 5-4 provides some useful information about the potential for additional residential units in three types of receiving areas: activity centers, economic development districts, and transitional areas. While there is considerably more land in the Hillsborough and Efland-Mebane transition areas than the other two categories of receiving area type combined, more land has already been developed in these areas or is consumed by road rights-of-way. Other restrictions, such as protected areas, further limit the number of units of residential development that can be supposed for the Receiving Areas.

Figure 5-4. Land in Receiving Areas, by Area Type

Transitional Areas	9,168	6,070	274	1,214
<i>Efland-Mebane</i>	6,627	3,789	80	758
<i>Hillsborough</i>	2,541	2,281	194	456
Activity Nodes	2,507	2,140	130	428
<i>Carr Store</i>	500	469	5	94
<i>Cedar Grove</i>	501	429	15	86
<i>Schley</i>	502	443	20	89
<i>Caldwell</i>	500	442	40	88
<i>White Cross</i>	503	357	50	71
Economic Development Districts	2,009	1,067	203	213
<i>Buckhorn</i>	858	503	90	100
<i>Hillsborough</i>	620	367	60	73
<i>Eno</i>	530	197	53	40
Sources: TOTAL	<i>rea Plan;</i> 13,685	<i>nsive Pl</i> 9,277	<i>ing Densit</i> 607	<i>ern,</i> 1,855

Efland-Mebane Small A Comprehensive "Existing Patterns" Planning Department database of the Strategic Growth Plan report.

i Underdeveloped land is defined as those areas that are developed to less than their potential allowed by current zoning regulations.

ii RPA is Resource Protection Area, including various protected lands that cannot be developed or cannot be developed to the potential allowed by current zoning regulations.

iii These two columns indicate the number of residential units permissible on developable lands if zoning densities were raised to three and six units per acre.

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From January 2002 through December 2005, there were 1,477 certificates of occupancy issued for residential building permits. The charts in Figure 5-5 indicate the annual certificates of occupancy for each intervening year (right) and the type of housing provided during this time period (left).

Figure 5-5. Certificates of Occupancy and Housing Types Permitted, 2002-2005
0501001502002503003504004502002200320042005Certificates ofOccupancy Single FamilyTown HomeManufactured

Orange County Planning Staff has estimated that 177 (20 manufactured homes, 36 town homes, and 121 single family homes) are located within the transitional areas or in the economic development districts. Thus, nearly 12% of the total new residential building starts since January of 2002 are located within the potential receiving areas. However, this may change if the allowable densities provide better economic return to developers looking to minimize land acquisition and infrastructure improvement costs.

The study began by estimating the profitability of TDR credits to developers in the nine different receiving areas. Profits from prototype developments were estimated according to existing zoning and then with the additional density from TDR credits. It should be noted, however, that data limitations prevented the study from forming reliable conclusions on the amount of profit that would be collected from the TDR credits. This type of analysis will require significant investments to gather accurate data, including estimates of revenues and costs for completed developments including estimates of cost components for land acquisition; government approvals; holding costs and development costs both on and off-site. In addition, this may involve the assistance of a local appraiser or real estate professional with access to detailed local property sales data.

V. Summary of Economic Analysis

The recommended program structure is a free market where buyers and sellers exchange credits freely. The price is based on a negotiation between buyers and sellers. Both parties are informed through information distributed by the County and by the large number of conservation easements already purchased by the County. An appraisal of the easement will assist in determining the accurate price of the easement. Using this structure, developers will go to where the TDR credits are least expensive. For Sending Area Scenario No. 1, this will mostly likely mean that the rural areas with no urban influence will be preserved first. Sending Area Scenarios No. 2 and 3 focuses the receiving areas on growth pressure and natural resource areas and thus these areas will be preserved first. For the Receiving Areas, a mechanism would be required to adjust the existing zoning-based density allowances upwards during a TDR transaction. Although this mechanism may resemble a traditional rezoning, it is critical to consider in the program design the issues of (1) providing surety to the development community that the rezoning will take place if all appropriate steps/measures have been taken, and (2) that the County designate the Receiving Areas through a map, overlay zone, or some other device that clearly identifies the location of the Receiving Areas. Additional conditions may be placed on TDR transactions to provide existing property owners in the vicinity of a Receiving Area some confidence about potential issues related to potential traffic, appearances, and so forth.

Within the free market structure, the County acts as a broker. This role would include putting a number of constraints on how the TDR market operates such as limiting the parcels of land allowed to sell TDRs and which ones can use TDRs to increase development, adjusting the density bonus and TDR allocation rate to ensure equilibrium prices and quantities, and facilitating sales through bringing buyers and sellers together and providing them with relevant information on the transaction process. Through publicizing information about how parties can reach each other and providing information about past sales and sales prices, the County can reduce transaction costs and increase efficiency in the market. (McConnell et al, 2003).

Given the assumptions, all scenarios will provide an attractive market for the exchange of TDR credits. All three sending area scenarios will produce a sufficient supply of credits. However, there is an imbalance in supply and demand as shown in Figures 5-2 and 5-4. Because of the large size of Sending Area Scenario 1 (includes all land within the County's jurisdiction except for land in the receiving areas), there is a large amount of credits that cannot be accommodated within the receiving area. Sending Area Scenario 2 also produces a large amount of credits that are not accommodated. Sending Area Scenario 3 is slightly smaller and produces an acreage that is more balanced with the demand of the Receiving Area acreage. It is not entirely clear that the imbalance is significant to the success of the TDR program, since the existence of

the TDR program itself may encourage more development pressures within the Receiving Areas than has been the case in recent years. If it becomes important to address this imbalance, then the following initiatives can be taken during the initial program design or at a later time:

- increasing the density bonus rate;
- adjusting the TDR allocation rate;
- a reduction in the participation rate of the sending areas;
- enlarging the size of the receiving areas;
- reduced demand through applying design standards or affordable housing requirements;
- making the conservation easement language more restrictive in Sending Areas;
- allocating more credits for certain types of development; and
- converting sending area credits to credits for increasing commercial development within Economic Development Zones or other areas suitable for commercial use.

Regarding this last item, that of converting residential TDR credits in Sending Areas to commercial credits in TDR Receiving Areas, this is a promising modification that should be considered during the TDR program design phase, but may be more appropriate to consider after the TDR program has been in operation for some time since this potentially complicates the terms of TDR transactions. It is easy to envision how a commercial conversion allowance could help encourage redevelopment of low-productivity retail centers or inject desirable neighborhood-scale commercial development at activity nodes in certain locations in the County. However, the need to determine the appropriate conversion rate and the provision of additional conditions that might be needed to accommodate higher-traffic, higher-impact commercial development would potentially complicate the initial inception of the TDR program. The appropriate timing of considering adding commercial conversion allowances might be coterminous to the consideration of adding incorporated municipal governments into the TDR program, since the commercial conversion allowance incited some positive responses from municipal representatives during the key stakeholder interviews.

The supply and demand imbalance will be fully addressed in Phase III, Program Design. Due to the high variability in the cost of land within the County, it is recommended that the County and participants in the TDR program should consider an appraisal for the development easements on the subject properties. This process is currently used by the County when purchasing conservation easements. An appraisal will help ensure that both buyers and sellers are treated fairly and receive consistent and fair pricing.

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One potential option to address problems, if any, related to having more Sending Area acreage than exists in Receiving Areas is that the program be structured in phases. The first phase uses targeted sending and receiving areas - the Receiving Area combined with parts of Sending Area Scenarios 2 or 3. Once the County develops experience with the start-up TDR Program, the Program can be expanded to include places in Sending Area Scenario 1.

References

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